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**Project Document template for nationally implemented projects
financed by the Green Climate Fund (GCF)**

Project title: Accelerating the transformational shift to a low-carbon economy in the Republic of Mauritius	
Country: Republic of Mauritius	
Implementing Partner: Ministry of Finance and Economic Development (MoFED)	Management Arrangements: National Implementation Modality (NIM)
UNDAF/Country Programme Outcome: UNDAF OUTCOME: Design and Implementation of a portfolio of activities and solutions developed at national and sub-national levels for sustainable management of natural resources, integration of ecosystem services approaches, sound management of chemicals and waste while ensuring that climate change challenges in terms of adaptation and mitigation are fully addressed CPD 2017-2020 Output 1: Scaled up action on climate change mitigation across sectors which is funded and implemented	
UNDP Strategic Plan Output: Output 1.4: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented	
UNDP Social and Environmental Screening Category: Moderate	UNDP Gender Marker for each project output: Output 1 (Sub-component 1): 2 Output 2 (Sub-component 2): 1 Output 3 (Sub-component 3): 2
Atlas Project ID/Award ID number: 00105006	Atlas Output ID number: 00106328
UNDP-GEF PIMS ID number: 5681	GCF ID number: 0033
Planned start date: 01 Sept 2017	Planned end date: 30 June 2025
LPAC date: July 10, 2017	
Brief project description: With 84% of its primary energy requirements met from imported fossil fuels, Mauritius, like many Small Island Developing States (SIDS), is extremely vulnerable to energy shocks. The grid emission factor of Mauritius is extremely high at 1.01 tonnes CO ₂ /MWh due to the prevalence of imported coal (39%) and fuel oil (38%) in the electricity generation mix. Net greenhouse gas emissions are increasing at a rapid rate of 3% per year. The pressing need to significantly enhance Mauritius's energy independence and reduce greenhouse gas emissions is recognised in the country's Nationally Determined Contribution (2016), its Second National Communication to the UNFCCC (2010) and its UNFCCC Technology Needs Assessment (2014), as well as in a comprehensive suite of	

Government strategies and policies contained in the Long-Term Energy Strategy (2011-2025).

Following a broad consultative process led by the NDA and backed by sound technical and financial analysis as well as considerable political will, this project will remove the principal bottlenecks to investment in low-carbon development for: (i) grid-connected intermittent renewable energy; and (ii) mini-grid PV for the principal outer island, Agalega. The project will be implemented in a two-phase approach so as to reduce the implementation risks to the GCF and ensure that the second funding disbursement is contingent upon successful completion of the first phase.

The project seeks a total of USD 28.21 million of GCF grant resources, split across phase 1 (USD 12 million) and phase 2 (USD 16.21 million), to overcome identified barriers to low-carbon investment. The incremental logic of the project and its requirement for grant resources are clearly laid out in the proposal. Overall, the project will result in a reduction in greenhouse gas emissions of 4.27 million tCO₂e over the lifetimes of the investments enabled, at a cost to the GCF of just USD 6.6/tCO₂e.

FINANCING PLAN		
GCF grant		USD 28,210,000
Cash co-financing to be administered by UNDP		USD 1,380,000
(1) Total Budget administered by UNDP		USD 29,590,000
PARALLEL CO-FINANCING <i>(all other co-financing (cash and in-kind) administered by other entities, non-cash co-financing administered by UNDP)</i>		
	Government- MEPU	USD 1,000,000
	Government- CEB	USD 122,000,000
	Government- AFD	USD 37,900,000
	Government- OIDC	USD 900,000
	(2) Total co-financing	USD 161,800,000
	(3) Grand-Total Project Financing (1)+(2)	USD 191,390,000
SIGNATURES		
Signature:	Agreed by Government	Date/Month/Year:
Signature:	Agreed by Implementing Partner, Ministry of Finance and Economic Development	Date/Month/Year:
Signature:	Agreed by UNDP	Date/Month/Year:

Disbursement: Annex 1 forms an integral part of this Project Document and to this end the Government hereby acknowledges that it has read and agrees to be bound, mutatis mutandis, by the obligations and agreements set forth in the [FAA] to the extent that they relate to actions of the Government, including, but not limited to, those set forth in Clauses 8 and 9.02 of the FAA. For the avoidance of doubt, the Government shall ensure that all conditions that relate to its actions are met and there is continuing compliance, and understands that availability of GCF funding is contingent on meeting such requirements and such compliance.

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List of Acronyms and Abbreviations

AC	Air Conditioning
ADMS	Advanced Distribution and Management System
AGC	Automatic Generation Control
AFD	Agence Francaise de Développement
AMA	Accreditation Master Agreement (GCF)
AMI	Advanced Metering and Infrastructure
BESS	Battery Energy Storage Systems
CC	Climate Change
CEB	Central Electricity Board
CPD	Country Programme Document (UNDP)
DPC	Direct Project Cost
EEMO	Energy Efficiency Management Office
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
ENPV	Economic Net Present Value
ERC	Evaluation Resource Centre (UNDP)
FAA	Funded Activity Agreement (GCF)
FIRR	Financial Internal Rate of Return
FiT	Feed-in Tariff
FNPV	Financial Net Present Value
GCF	Green Climate Fund
GHG	Greenhouse Gas
GEF	Global Environment Facility
IEC	International Electro-technical Commission
IEEE	Institute of Electrical and Electronic Engineers
IEO	Independent Evaluation Office (UNDP)
IPP	Independent Power Producers
IRENA	International Renewable Energy Agency
KM	Knowledge Management
kW	Kilowatt
kWp	Kilowatt peak
LPAC	Local Project Appraisal Committee
M&E	Monitoring and Evaluation
MARENA	Mauritius Renewable Energy Agency
MEPU	Ministry of Energy and Public Utilities
MoESDDBM	Ministry of Environment, Sustainable Development, Disaster and Beach Management
MoFED	Ministry of Finance and Economic Development
MOU	Memorandum of Understanding
MTR	Midterm Review
MUR	Mauritian Rupee
MW	Megawatt
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NIM	National Implementation Modality
NREL	National Renewable Energy Laboratory (USA)
O&M	Operation and Maintenance
OIDC	Outer Island Development Corporation
PIR	Project Implementation Review
PV	Photovoltaic

RE	Renewable Energy
SBAA	Standard Basic Assistance Agreement (UNDP and Government of Mauritius)
SDG	Sustainable Development Goal
SESP	Social and Environmental Screening Procedure (UNDP)
SIDS	Small Island Developing State
SIPP	Small Independent Power Producer
SSDG	Small-Scale Distributed Generation
tCO ₂ e	Tonnes of carbon dioxide equivalent
TE	Terminal Evaluation
TOR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Programme
UNDP CO	UNDP Country Office
UNDP-GEF	UNDP Global Environmental Finance
UNDP POPP	UNDP Programme and Operations Policies and Procedures
USD	United States Dollar
WACC	Weighted average cost of capital

II. DEVELOPMENT CHALLENGE

1. The Republic of Mauritius is an island nation off the south-east coast of the African continent in the south-west Indian Ocean, approximately 900 km east of Madagascar. In addition to the island of Mauritius, the Republic includes the islands of Cargados Carajos, Rodrigues and the Agalega Islands, totalling a population of 1.3 million inhabitants. The climate of the South West Indian Ocean small island states is influenced by large ocean-atmosphere interactions, notably the trade winds. Changes in ocean circulation patterns are changing climatic conditions faster than the global average. The Small Island Developing States (SIDS) in this region are often affected by tropical cyclones and other extreme weather.¹ Some of them, such as the Cargados Carajos Shoals and Agalega Islands, are threatened by sea-level rise as well.² On the basis of reconstructed tide gauge data for the period 1950-2001 and complementary Topex/Poseidon altimeter data, the cumulative sea level rise in the South West Indian Ocean has been 7.8 cm at Port Louis.³
2. The impacts of climate change are a major concern to the Republic of Mauritius, including Rodrigues, St Brandon and Agalega. A key vulnerability is the energy system. Mauritius is heavily reliant on fossil fuels to power its economy. The grid emission factor of Mauritius is an extremely high 1.01 tCO₂/MWh⁴ due to the prevalence of imported coal (39%) and fuel oil (38%) in the electricity generation mix.⁵ Furthermore, extreme weather events, such as higher-intensity tropical cyclones, disrupt supply chains for fuel delivery, and may also damage or destroy key parts of the above-ground electricity transmission and distribution systems. Even relatively modest measures to reduce fossil fuel use therefore have the potential to significantly enhance Mauritius's energy independence and reduce greenhouse gas emissions. This fact is recognised by the Government, which has embarked on a national strategy to reduce the country's dependence on fossil fuels – not only for energy security and climate change mitigation purposes but also to improve the country's deteriorating balance of payments.⁶ In this context, the Government has recently cancelled the planned construction of a 110 MW coal-fired power plant.⁷
3. The Second National Communication to the UNFCCC (2010)⁸ notes that Mauritius's overall greenhouse gas (GHG) emissions are growing by 3% per year, and those from the energy sector specifically by 5.4% per year. The energy sector accounts for 62% of Mauritius's total greenhouse gas emissions of 3.8 MtCO_{2e}. As identified by the country's UNFCCC Technology Needs Assessment (2014)⁹, solar energy and energy efficiency offer significant potential, particularly as the country's major current source of renewable energy – bagasse (biomass residue from sugarcane processing), which accounts for 16% of Mauritian electricity generation and 80% of renewable electricity generation – is intrinsically not scalable, due to land constraints and its seasonal availability.
4. The Government's drive to reduce fossil fuel use is reflected in the Long-Term Energy Strategy 2009-2025¹⁰. Under this Strategy, the Government has recently announced two key targets¹¹: (1) a renewable energy (RE) target of at least 35% of electricity production by 2025¹²; and (2) the establishment of a

¹ <http://metsservice.intnet.mu/publications/list-of-historical-cyclones.php>

² UNEP (2006), *Africa Environment Outlook 2*, <http://www.unep.org/dewa/Africa/publications/AEO-2/content/090.htm>

³ Second National Communication to UNFCCC (2010).

⁴ https://cdm.unfccc.int/methodologies/standard_base/Grid_emission_Mauritius.pdf

⁵ http://statsmauritius.govmu.org/English/Publications/Documents/EI1248/Energy_Water_Stats_Yr2015.pdf

⁶ In 2014, fuel and related products accounted for 19% of total imports:

<http://statsmauritius.govmu.org/English/StatsbySubj/Pages/Export-and-Import-1st-Quarter-2015.aspx>

⁷ <http://mauritiusassembly.govmu.org/English/hansard/Documents/2015/hansard0615.pdf>

⁸ <http://unfccc.int/resource/docs/natc/musnc2.pdf>

⁹ http://unfccc.int/ttclear/templates/render cms_page?TNR_cre

¹⁰ <https://sustainabledevelopment.un.org/content/documents/1245mauritiusEnergy%20Strategy.pdf>

¹¹ <http://www.investmauritius.com/budget2015/SREnergy.aspx>

¹² As indicated in Annex XIIIg to the Funding Proposal, the breakdown of this target is as follows: hydro: 2.2%; bagasse: 14.5%; small-scale and medium-scale solar PV: 0.6%; wind: 4.5%; solar: 4.6%; waste-to-energy: 8.7%.

dedicated Mauritius Renewable Energy Agency (MARENA) to coordinate the rapid uptake of renewable energy.

5. The GCF proposal is fully aligned with the *Nationally Determined Contribution (NDC) Action Plan*, which was approved by the Cabinet in March 2016 and which clearly references the GCF project.¹³ The NDC explicitly reiterates the 35% renewable energy target by 2025 and indicates the need to modernise the national electricity grid through the use of smart-grid technologies. Furthermore, the catalytic role of the GCF is made clear in the NDC (page 4): “Mauritius is working towards mitigating its emissions and implementing adaptation actions. However, the proposed adaptation and mitigation activities can only be implemented in the medium and long term with necessary support from international funding agencies, grants from climate funds, transfer of appropriate and affordable adaptation and mitigation technologies, technical assistance and capacity development.” The GCF project will enable Mauritius to fully meet its stated target of 35% renewable electricity production by 2025¹⁴ and will give credence to the Government’s stated objective in the NDC of sustaining such a level in the period 2025 to 2030.
6. Owing to the impact of climate change, the Government of Mauritius will face heavy spending on climate change adaptation. While the GCF project is not specifically focused on adaptation, it will nonetheless offer the Government key adaptation benefits in the form of a more stable grid, reduced reliance on energy imports, and a more energy-secure Outer Island population. The project will deliver benefits that are fully aligned with the National Climate Adaptation Framework of Mauritius (2012).¹⁵ The project is also clearly aligned with the Mauritius NDC and the accompanying Action Plan which requires investments of the order of USD 5.2 billion, of which the proposed GCF project is a small contribution. As Mauritius is a SIDS and located a long distance from the African continental landmass, the costs of adaptation and mitigation are exacerbated.
7. The project is consistent with and integrated into the United Nations Country Programme Document (CPD) for Mauritius for the period of 2017 through 2020. The second of two development pillars in the CPD is “*Climate Change and Sustainable Development*”, and the GCF project is included within Output 1 of the CPD: “*Scaled up action on climate change mitigation across sectors which is funded and implemented*”. In accordance with the UN’s focus and expertise on human development, the CPD highlights the importance of focusing sustainable development efforts on the most vulnerable sectors of society, including the poorest areas of Rodrigues and Agalega. The design of the GCF project is fully in line with this development objective.
8. The project will also contribute towards achievement of several Sustainable Development Goals (SDGs) in the country; starting with SDG 13, “*Take urgent action to combat climate change and its impacts*” and SDG 7, “*Ensure access to affordable, reliable, sustainable and modern energy for all*”, and specifically Target 13.b, “*Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities*”, and Target 7.2, “*By 2030, increase substantially the share of renewable energy in the global energy mix.*”. The co-benefits generated with support from the GCF funding, e.g., job creation and resilient infrastructure, will also contribute towards SDG 8 and 9, respectively.

¹³ The NDC is provided in Annex XIIIa to the Funding Proposal.

¹⁴ The 25 MW of small- and medium-scale PV that will be installed through Component 2 of the project will directly provide an incremental 2% of renewable energy, thereby directly contributing to the overall 35% target. Through the Improvement in Grid Absorption Capacity support provided by the GCF project, CEB will be able to accept the full 35% of intermittent renewables – as analysed in detail in the Mercados grid absorption study (Annex IIa to the Funding Proposal).

¹⁵ See Annex XIIIc to the Funding Proposal.

III. STRATEGY

i. Strategic Approach:

9. The project costs of the following 3-inter-related sub-components, designed to achieve the envisaged fund level impact of the project of “*Reduced emissions through increased low-emission energy access and power generation*”:
 - Sub-component 1: Institutional strengthening for renewable energy
 - Sub-component 2: Improving grid absorption capacity followed by PV deployment
 - Sub-component 3: PV mini-grids on the Outer Island of Agalega
10. Each of these three elements of the GCF project address fossil fuel dependency: greater locally-generated renewable energy increases resilience to climate change. This is true of each sub-component, but particularly so for Sub-component 3, PV installations on Agalega, which, when major storms interrupt supply, is left without power. Enabling and developing distributed renewable energy generation sources (Sub-components 1, 2 and 3) reduces transmission and distribution losses and also will facilitate more rapid recovery from transmission system failures resulting from extreme events. In particular, at least some electricity supply will be available for some essential uses immediately after such a transmission system interruption, albeit on a fragmented grid. This will substantially improve resilience through the ability to immediately direct power to hospitals, emergency centres and other essential services.
11. The project will be implemented in two phases so that funds can be disbursed in a logical and appropriate manner without burdening the GCF, the Executing Partner or the Responsible Parties. Phase 1 will be implemented between 2017 and 2019; Phase 2 will be implemented between 2020 and 2024.
12. Phase 1 will put in place the necessary framework for further deployment of renewable energy during Phase 2. By the end of Phase 1, the Mauritius Renewable Energy Agency will be fully operational and will be contributing to the development of the energy landscape of Mauritius. CEB will have completed the centralised elements of its improvement of Grid Absorption Capacity (AGC system and batteries) and grid absorption capacity will have been substantially increased to accommodate a total of 185 MW of intermittent RE. Under Phase 1 (2017-2019), the following sub-components will be executed:
 - Sub-component 1: Institutional strengthening for renewable energy
 - Sub-component 2, Phase 1: Improving Grid Absorption Capacity followed by PV deployment
13. Phase 2 will build on experiences obtained and frameworks put in place in Phase 1 in order to accelerate the deployment of PV and hybrid buses. The PV systems installed under Phase 4 of the Small-Scale Distributed Generation (SSDG) scheme will enable the visibility of the GCF project to be scaled-up, with an expected ~3,927 beneficiaries across all user categories. 25 MW of rooftop PV will be on the (strengthened) grid. The three villages of Agalega will be supplied with clean energy, thereby becoming an example for all SIDS. Under Phase 2 (2020-2024), the following sub-components will be executed:
 - Sub-component 2, Phase 2: Improving Grid Absorption Capacity and PV deployment
 - Sub-component 3: PV mini-grids on the Outer Island of Agalega

ii. Theory of Change:

14. As illustrated in the theory of change diagram in [Annex 5](#) and described below, the mobilised financial and technical resources will be used to remove the barriers hindering the transformational shift to a low-carbon economy in the Republic of Mauritius.

Sub-component 1: Barrier Removal

15. With the assistance of the GCF project, the Ministry of Energy and Public Utilities (MEPU) will receive the necessary assistance to develop a fit-for-purpose legal and regulatory framework to allow the ambitious scale-up of renewable energy in Mauritius. GCF funding will also be used to develop a staffing plan/structure for MARENA that is aligned with the needs of the Long-Term Energy Strategy; to develop a secondment strategy that will allow experienced CEB and MEPU staff to work at MARENA for limited periods (e.g. 1-2 years), thereby building capacity quickly. With GCF support, MARENA will be empowered and fully operationalised to assist renewable energy (RE) investors, particularly Independent Power Producers (IPPs), in reducing the transaction costs and time delays currently associated with RE investments. MARENA will also provide technical oversight and policy planning support.
16. The Government has earmarked approximately USD 500,000 in the current budget (2015-2018) to establishing MARENA. However, this is insufficient if the Agency is to live up to its market-catalytic potential. Incremental GCF support of USD 1.1 million will ensure this potential is met.

Sub-component 2: Barrier Removal

17. Currently, the national grid is only able to accept 60 MW of intermittent renewable energy. With the assistance of the GCF project, the Central Electricity Board (CEB) will be enabled to acquire and install the equipment necessary to raise the acceptable level by 125 MW – i.e., so that, in total, 185 MW of intermittent renewable energy can be connected to the grid without jeopardising grid stability.¹⁶ The GCF project will provide technical and financial support to the required improvement in Grid Absorption Capacity through USD 10.9 million of GCF finance and USD 20 million of co-finance (USD 1 million grant from UNDP, USD 17 million of concessional lending from the Agence Francaise de Développement (AFD) and a contribution of USD 2 million from CEB).
18. 25 MW of this new intermittent renewable power will be supplied by rooftop PV installations facilitated through a GCF-supported Phase 4 of the SSDG scheme, which will target households, NGOs and public buildings (see **Table 1** below). All Phase 4 PV installations will be governed by the terms of the Small-Scale Distributed Generation grid code (installations up to 50 kW) or by the Medium-Scale Distributed Generation grid code (installations between 50 kW-2 MW). These grid codes were developed by CEB with UNDP assistance and were formally introduced in 2014. The remaining 100 MW of renewable energy capacity¹⁷ will be installed by CEB and Independent Power Producers at utility-scale (installations greater than 2 MW) according to CEB’s standard tender process.¹⁸ Over 39 MW of such utility-scale power has already been pipelined but has been unable to proceed because of grid stability constraints.

Table 1: SSDG Phase 4 User Categories

Category of User	Total MW Allocated	Number of Beneficiaries	Average Size of System
Households	10 MW	2,800 – 5,000	2 kWp – 3.5 kWp
NGOs	4 MW	8 – 20	200 kWp – 500 kWp
Public buildings (including schools, charitable institutions, orphanages, bus shelters, etc.)	11 MW	1,400 – 2,200	5 kWp
Total	25 MW		8 kWp – 14 kWp

19. To be clear, the GCF project will facilitate a total capacity of 185 MW of renewable energy on the Mauritian grid through its support to improving Grid Absorption Capacity. Of this 185 MW, 25 MW will be directly facilitated by the GCF project through its support to a fourth phase of the SSDG scheme. The GCF project will enable the residual 100 MW (through improving Grid Absorption Capacity) but will not be directly involved in financing or supporting these utility-scale installations.

¹⁶ In the case of intermittent renewables, it is the stability of power system frequency that is of principal concern.

¹⁷ The grid will be enabled to handle 185 MW of intermittent renewable energy in total. 60 MW of such capacity is already on the grid and the SSDG Phase 4 scheme will, with GCF support, result in a further 25 MW of installations – leaving 100 MW of additional RE capacity to be provided by CEB and IPPs.

¹⁸ <http://ceb.intnet.mu/tenders/TenderList.asp>

20. GCF resources will be used to support SSDG Phase 4 users to partially cover the upfront cost of investing in small- and medium-scale PV systems. For households, NGOs and public buildings, the grant will cover an average of approximately 27% of the upfront system and installation cost (with the balance coming from loans (AFD) or users' own resources), as it is considered to be a more equitable approach than a feed-in tariff (FiT) (which will be discontinued in Phase 4 of the GCF-supported SSDG scheme)¹⁹ to ensure scaled-up adoption of small-scale PV.
21. Overall, these grant resources will represent just ~6% of the total investment cost associated with the expected 185 MW of renewable energy to be installed by 2023. In addition to the upfront grant provided by GCF resources, AFD will, if the GCF project is approved, establish a loan scheme for PV adopters under SSDG Phase 4 so that the residual (post-grant) purchase price of the PV systems can be borrowed and then repaid in instalments. The AFD loan will be at 2.86% assuming current Euribor levels.
22. On the main island of Mauritius, the small size of the power system poses two problems: first, the loss of a single component (such as a generator) represents a significant portion of the total load and, second, the system has low inertia and is therefore more sensitive to generation/load changes. For a power system with these characteristics and a high penetration of intermittent renewable energy, such as solar power, the system is even more exposed to frequency instability due to the volatile power output. Based on a comprehensive suite of technical studies²⁰, CEB, with the help of the GCF and AFD, will implement a number of technology-oriented Grid Absorption Capacity solutions to maintain grid stability while allowing greater injections of renewable electricity. These solutions will include the Battery Energy Storage System (BESS), Automatic Generation Control (AGC), the Advanced Distribution Management System (ADMS) and Advanced Metering Infrastructure (AMI).
23. GCF funds will contribute to the cost of the BESS in conjunction with CEB and AFD co-financing. GCF will co-finance the AGC in conjunction with AFD. GCF will co-finance the ADMS with AFD. The AMI (i.e. smart meters and associated equipment) will not be supported by the GCF but will, rather, be financed entirely by CEB and AFD.

Sub-component 3: Barrier Removal

24. The argument for introducing PV power on Agalega is very clear. As outlined in a PV assessment study commissioned by UNDP in 2010 (Annex IId to the Funding Proposal) and a later costing study (Annex IIe to the Funding Proposal), with Agalega's insolation and electricity demand profile, hybrid mini-grids²¹ serving the three villages could source ~80% of their electricity from solar power, requiring only relatively minor injections of diesel power. This would result in financial savings to the Outer Island Development Corporation (OIDC) of USD 106,000 per year – resources that OIDC is committed to allocating to long-term upkeep and expansion if given the opportunity. The principal barrier preventing the three villages of Agalega from operating solar-diesel hybrid mini-grids is technical capacity. A number of PV systems have been mothballed since 2009 because of a lack of trained technicians to maintain the system.

¹⁹ SSDG Phase 4 adopters – small-scale IPPs – will function under the Net Metering Scheme: their PV-generated electricity will be exported to the grid and will offset their monthly energy imported from the grid; excess energy will be banked in the form of kilowatt-hour (kWh) credits. These credits can be used when the customer's system is not generating enough electricity to meet her/his demand and can be cashed at the end of the contract.

²⁰ See Annexes IIa, IIb, IIc, IIh and IId to the Funding Proposal, in particular.

²¹ A 150 kW hybrid mini-grid in Vingt Cinq and 75 kW hybrid grids in La Fourche and Sainte Rita.

IV. RESULTS AND PARTNERSHIPS

i. Expected Results:

Mitigation impact

25. The project will result in a real and visible paradigm shift in the Republic of Mauritius towards low-carbon sustainable development. The project directly addresses the largest-emitting sector in the country – i.e., energy generation – and implements actions specifically recommended in the Nationally Determined Contribution, the Second National Communication to the UNFCCC and the UNFCCC Technology Needs Assessment.
26. The project is expected to result in direct emission reductions of ~196,000 tCO₂e, broken down by sub-component as follows in **Table 2**:

Table 2: Direct and Indirect Emission Reductions to be achieved by the GCF Project

Component	End-of-Project Emission Reductions (tCO ₂ e)		Source of Emission Reductions
	Direct	Indirect	
Sub-component 1: Institutional strengthening for renewable energy	Not applicable	Not applicable	Complementary to and supportive of, Component 2 in particular.
Sub-component 2: Improving Grid Absorption Capacity and PV deployment	161,600 (PV deployment) and 33,000 (Smart Grid)	484,800	Grid-connected renewable energy displacing a grid emission factor of 1.01 tCO ₂ /MWh.
Sub-component 3: PV mini-grid on the outer island of Agalega	1,400	-	PV mini-grid electricity displacing diesel-generated electricity.
Total	196,000	484,800	

27. The project will, in total (direct and indirect emission reductions), reduce ~681,000 tCO₂e by the end of the project and 4.3 million tCO₂e over the lifetimes of the investments enabled by the project.

Strengthened enabling environment

28. By providing the technical, legal and financial incentives for the promotion of renewable energy, the GCF project will encourage both public and private actors to invest in renewable energy sources. The public sector will be a long-term beneficiary and promoter of renewable energy through the Mauritius Renewable Energy Agency and the Central Electricity Board. The private sector will benefit from the enabling environment created by the Improving Grid Absorption Capacity component so as to be able to invest in IPP projects.

Innovation, market development, and transformation

29. GCF support to the expansion of the rooftop PV sector in Mauritius will build on a strong baseline project – Phases 1, 2 and 3 of the Small-Scale Distributed Generation (SSDG) scheme – and represents an innovative approach through the use of an upfront partial grant mechanism for households and non-commercial adopters rather than a feed-in tariff. An undifferentiated feed-in tariff approach is considered financially unsustainable and unduly ‘locks in’ the Government to long-term commitments; moreover, it serves to exclude a large proportion of the (lower-income) population from adopting PV technology. The grant element that will be incorporated into Phase 4 of the GCF-supported SSDG will reduce consumers’ acquisition costs and perceived investment risks. GCF-assisted removal of financial, institutional, capacity and information barriers will also contribute to the development of the solar PV market locally, and may open up potential regional export / investment opportunities for Mauritius.

ii. Partnerships:

30. Effective partnerships will be critical during project implementation and in the long run. The Government of Mauritius is proceeding with establishment of MARENA, to coordinate rapid uptake of

renewable energy. The Small-Scale Distributed Generation (SSDG) scheme is also continuing to be implemented. The SSDG scheme has assisted 237 households, schools and public institutions to install small-scale (<50 kW) photovoltaic (PV) panels and wind turbines through the provision of a targeted feed-in tariff scheme. Such was the success of the scheme that its 2 MW capacity cap (in SSDG Phase 1) was reached in less than one year of the scheme starting, and subsequent extension of the scheme (SSDG Phase 2) led to an additional 0.94 MW being added within 12 months. Currently, a net-metering scheme (SSDG Phase 3) is ongoing with no special feed-in tariff and is proceeding slowly given the lack of support.

31. Under a recently-closed UNDP-implemented, GEF-financed project, 'Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings'²², assistance was provided to MEPU to establish the Energy Efficiency Management Office (EEMO). In parallel with UNDP's support to EEMO, Agence Française de Développement (AFD) has been assisting a joint MEPU-private sector taskforce to develop a National Plan of Action on Energy Efficiency.
32. The OICD has long been advocating the use of PV for Agalega. A number of PV systems were installed by the MEPU in 2000 to service the local population: for example, a PV mini-grid in Vingt Cinq, the largest village, supplied communication equipment, administrative buildings and a small dispensary, together with 30 solar-powered street lights (the first street lighting on the island), initially with great success and to popular acclaim. However, underlying barriers to sustainable use of the PV technology, notably lack of training for island-based technicians and the lack of a systematic sourcing mechanism for spare parts, led to regular breakdowns and ultimately mothballing of the systems in 2009. Building local technical capacity, as well as reinstating and enhancing the current PV systems, remains a key priority for OICD.

iii. **Stakeholder engagement:**

33. The project will engage with stakeholders at the local, national, and regional level, utilising existing structures as much as practicable.

Beneficiary Groups

34. The GCF project targets less affluent Mauritians, but the entire population will benefit. By increasing the use of local renewable energy and reducing the reliance on imported fossil fuels, Mauritius will benefit economically and will be less vulnerable to economic shocks from price fluctuations, as well as benefiting from fewer supply chain interruptions due to climate change-induced extreme weather events. At a higher level, policy-makers will benefit from an enhanced policy context as well as an understanding of climate relatedness of specific policy actions to better incorporate the issues connected with climate change mitigation into long-term planning in the energy sector.

Electricity Producers

35. All Mauritians will stand to benefit from the project since the facilitation of renewable energy uptake (Components 1 and 2) and the installation of PV facilities will be democratised through SSDG Phase 4 to be supported under the project. Those who do not benefit directly from the project (that is, those who do not have rooftop PV) will nonetheless benefit from increased grid stability, lower grid losses and more stable electricity prices over time. With a higher renewable energy content distributed throughout the grid, all Mauritians will benefit from more rapid re-establishment of supply after climate-forced interruptions.

Electricity Consumers

36. In the current circumstances, electricity consumers are vulnerable to imminent shortages in electricity production, as detailed in a recent World Bank report.²³ Electricity consumers are also vulnerable to damage to the national grid resulting from extreme weather events. Rooftop PV will provide them with

²² https://www.thegef.org/gef/project_detail?projID=2241

²³ World Bank (2015), *Assessment of Electricity Demand Forecast and Generation Expansion Plan with a focus on the 2015–2017 Period – Annex XIIIaa* to the Funding Proposal.

an energy source when the grid is unavailable and thus contribute to improving the resilience of electricity production nationally.

37. In line with the Government’s policy to better involve youth²⁴ and civil society organisations²⁵ in national initiatives, the project will adopt a socially-inclusive approach and the adoption of 25 MW of rooftop PV panels under the SSDG scheme will be targeted at these groups.
38. Similarly, residents of Agalega are vulnerable to lack of supply of diesel oil in the event of persistent bad weather or lack of transportation. By providing them with a domestic source of electricity and by equipping them with the necessary skills, OI DC will be empowered to improve the lives of the highly vulnerable small population. Residents of Agalega will therefore particularly benefit through reduction in their electricity supply vulnerability (since diesel deliveries will not be required beyond back-up), and through increased resilience by enabling local management of their energy supply.

Non-governmental Organisations (NGOs)

39. NGOs will be important partners throughout implementation of the project, assisting with community consultation activities, public outreach, and knowledge management.

Private Sector

40. Participation of the private sector is an important element with respect to enhancing the likelihood that the results achieved during the project’s lifespan will be sustained after GCF funding ceases. The private sector will benefit from the enabling environment created by the strengthened capacity of MARENA and through the Improving Grid Absorption Capacity element of the project, so as to be able to invest in IPP projects. Private sector stakeholders, particularly small and medium size enterprises, will also be offered training in Sub-Component 2.

Professional and Scientific Communities

41. The project will make substantive contributions to the knowledge base and skills set of the professional and scientific communities in Mauritius. Local specialists and institutions will participate in advisory roles and service providers. Through collaboration with international experts, local professionals will also benefit from state-of-the-art approaches in the energy sector.

Regional and International Partners

42. One of the main comparative advantages of the UNDP is the agency’s global footprint, and their collective strategic and technical expertise in advancing sustainable human development. UNDP will also help facilitate collaboration from other key regional and international partners.

iv. Mainstreaming gender:

43. With regard to gender, the project is aligned with the Government’s National Gender Policy Framework. A full Gender Assessment and Action Plan are provided in [Annex 7](#) and summarised below in **Table 3**. Furthermore, the UNDP Gender Seal Initiative²⁶ requires UNDP to actively advocate for equal participation of men and women at all levels. Therefore, in terms of selection of women for different project jobs and by the private sector, UNDP will advocate for equal participation and opportunity of access, especially in the private sector where the number of potential employees is much greater.

Table 3: Gender Analysis Summary

No.	Project Sub-component	Gender Analysis
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²⁴ <http://pmo.govmu.org/English/Documents/Reports%202015/Govt%20prog%202015.pdf>

²⁵ See the Ministry of Social Security website: <http://socialsecurity.govmu.org/English/Department/Pages/Non-State-Actor-Unit.aspx>

²⁶ The UNDP Gender Seal strategy document is provided in Annex X to the Funding Proposal.

No.	Project Sub-component	Gender Analysis
1	Institutional strengthening for renewable energy	<p>These components of the project will benefit the entire country and thus they are not biased against any gender.</p> <p>In fact, the Constitution of Mauritius guarantees the equality of all citizens and the respect of fundamental rights and freedom. In 1995, the Constitution was amended to make sex discrimination illegal. The recent adoption of an Equal Opportunities Act²⁷ in Mauritius constitutes an important step in the fight against sexual discrimination, by providing protection against sexual harassment and victimisation.</p>
2	Improving Grid Absorption Capacity and PV deployment	<p>To democratise access to rooftop PV systems in Mauritius, the GCF project will ensure that the socio-economic and gender profile of the PV beneficiaries will achieve a disproportionate skew towards lower-income households. As indicated in the 2012 Household Budget Survey (the latest such survey available, released in March 2015²⁸), 20% of Mauritian households earn over MUR 40,000 per month ('high income'); 35% earn MUR 20-40,000 ('middle income'); and 45% earn less than MUR 20,000 per month ('low income').</p> <p>During implementation, gender-disaggregated data will be collected, along with other indicators of vulnerable households. If the first tranche of implementation does not provide sufficiently targeted assistance, the selection criteria will be biased toward favouring target groups in subsequent tranches.</p>
2	Improving Grid Absorption Capacity and PV deployment	<p>Under these components, renewable energy and fuel efficiency projects will be conducted.</p> <p>It is to be noted that women in the Republic of Mauritius have identical access as men with regard to inheritance. Widows and widowers inherit the property of the deceased spouse, whatever the circumstances and the matrimonial regime, even if the deceased did not leave a written will. There are no legal or customary restrictions that favour male heirs over females.</p> <p>With respect to ownership of property other than land, women are treated equally with men under the law with respect to their legal rights to conclude contracts and administer property without the interference or consent of a male partner.</p> <p>There are no indications that Mauritian women face discrimination with regard to access to credit, such as bank loans. In a marriage under the community of property regime, either spouse must have their partner's consent to obtain a loan. Several measures have also been taken to ease the process of women's access to credit. The Development Bank of Mauritius (DBM) is also more flexible in its provision of developmental assistance for projects for women. A woman's specific situation (e.g. living separately from her husband or being in the process of divorce) is not an obstacle for her to take loans and start a business.</p> <p>Legally, men and women have equal rights with respect to economic opportunities, political participation, land tenure, property ownership, marriage and family.</p> <p>With regard to Components 1-3, the Ministry of Energy and Public Utilities (MEPU) has agreed to the following gender targets for the GCF project:</p> <ul style="list-style-type: none"> • At least 30% of MARENA Board members and at least 30% of MARENA staff are women • MARENA to define a supportive environment for policies and regulations that take into account the gender aspects of access to renewable energy • MARENA to establish sex-disaggregated data and relevant gender indicators on access to, and use of, renewable energy and to carry out gender-sensitive research relating to renewable energy • MARENA to undertake awareness campaigns on renewable energy for 500 women annually • Training of 100 female entrepreneurs in micro-enterprises to understand the technical aspects of PV systems • Introduction of technical training for women on the installation, operation and maintenance of solar PV systems • At least 33% participation of women in commercial PV-related activities.
3	PV mini-grids on the Outer Island of Agalega	<p>With regard to Components 1-3, the Ministry of Energy and Public Utilities (MEPU) has agreed to the following gender targets for the GCF project:</p> <ul style="list-style-type: none"> • At least 30% of MARENA Board members and at least 30% of MARENA staff are women • MARENA to define a supportive environment for policies and regulations that take into account the gender aspects of access to renewable energy • MARENA to establish sex-disaggregated data and relevant gender indicators on access to, and use of, renewable energy and to carry out gender-sensitive research relating to renewable energy • MARENA to undertake awareness campaigns on renewable energy for 500 women annually • Training of 100 female entrepreneurs in micro-enterprises to understand the technical aspects of PV systems • Introduction of technical training for women on the installation, operation and maintenance of solar PV systems • At least 33% participation of women in commercial PV-related activities.

44. An overall gender marker²⁹ of 2 is applied to the project. For Sub-component 1, the gender marker is 2, as one of the aims is to increase the number of women in the energy sector. Sub-component 2 has a gender marker of 1, the improved energy infrastructure and installation of PV systems will have indirect benefits to women, but this sub-component does not have a specific gender objective. The gender marker for Sub-component 3 is 2, as there are specific targets to train women as operation and maintenance technicians.

v. South-South and Triangular Cooperation (SSC/TrC):

²⁷ <http://eoc.govmu.org/English/Know%20Your%20Rights/Pages/Scope-of-the-Law.aspx>

²⁸ Provided in Annex X to the Funding Proposal.

²⁹ A gender marker measures the degree to which the project addresses gender equality and women empowerment. The UNDP gender marker system includes 4 levels: **0** = outputs that are 'not expected to contribute noticeably' to gender equality; **1** = outputs that will contribute 'in some way' to gender equality, but not significantly; **2** = outputs that have gender equality as a 'significant' objective; **3** = projects/outputs that have gender equality as a 'principal' objective. (Financing for Gender Equality and Tracking Systems, UNDP Background Note, September 2013).

45. There are a number of opportunities for the project to use south-south and triangular cooperation arrangements to enhance the likelihood that results achieved will be sustained after GCF funding ceases. Under Sub-component 1, GCF funding will that will allow experienced CEB and MEPU staff to work at MARENA for limited periods (e.g. 1-2 years), thereby building capacity quickly and also enabling establishment of South-South links with other energy regulators, notably in India and South Africa.
46. Results and lessons learned on the project will also provide guidance to other SIDS, consistent with a number of triangular cooperation arrangements among SIDS, including the SIDS Partnership Framework³⁰ agreed during the Third International Conference on SIDS held in 2014. For example, the envisaged transformation of Agalega into the first low-emission inhabited island in the Republic of Mauritius will be of particular interest to other SIDS, as Agalega exemplifies a number of common challenges, including being highly vulnerable to the impacts of climate change and highly reliant on fossil fuels for energy supply.

vi. **Knowledge:**

47. In order to influence institutional and individual change, it is imperative that the technological advances realized with the support of GCF funding are effectively communicated to a wide spectrum of stakeholders, including governmental decision makers, the scientific and professional communities, and household beneficiaries. The knowledge management strategy for the project is, therefore, multifaceted, and focused on producing informative knowledge products, enhancing access to the knowledge created, and mainstreaming the knowledge products and services created in order to garner ownership and to ensure sustainable institutional and financial support following completion of the planned investments.
48. The Project Coordinator and the three Project Managers will be responsible to facilitate implementation of the knowledge management strategy. UNDP's M&E reporting includes lessons learned as a specific section of evaluation reports. As there will be two interim reports and one final evaluation report, the lessons learned will be included therein and disseminated globally on the UNDP Evaluation Resource Centre (ERC) website.³¹ The project will also make provision for a lessons learned publication highlighting the achievements of the project and documenting lessons learned. These knowledge products will be shared on both national and international platforms, including the Sustainable Development Knowledge Platform³² maintained by the United Nations Division of Sustainable Development. As this Division also houses the SIDS Unit within the United Nations, there are also opportunities to utilize their outreach resources for disseminating information to other SIDS countries, in line with the SIDS Partnership Framework and other collaborative mechanisms.
49. At the national level, the project will maintain a website throughout the 8-year implementation timeframe, and information will also be made available on the websites and social media platforms of the responsible parties.
50. Knowledge management will also be supported by the three responsible parties, MEPU, CEB, and OIIC. Under Sub-component 1, the Mauritius Renewable Energy Agency (MARENA), as a new institution that plays a central role in the energy sector, will contribute to the creation and strengthening of knowledge, particularly for private-sector investors so as to promote the nascent Independent Power Producer (IPP) sector. With regard to Sub-component 2, CEB staff will be technically equipped to strengthen the national grid to be able to accept larger injections of intermittent renewable electricity. SMEs will receive training to enable them to enter the rooftop PV market. The grid equipment installed will

³⁰ On December 2015, the General Assembly decided (A/70/472/Add.2 - paragraph 11) to establish the Small Island Developing States Partnership (SIDS) Framework, in accordance with paragraph 101 of the SAMOA Pathway, to monitor and ensure the full implementation of pledges and commitments through partnerships for small island developing States.

³¹ See, for example, <http://erc.undp.org/evaluationadmin/manageevaluation/viewevaluationdetail.html?evalid=6610>.

³² The Sustainable Development Knowledge Platform is maintained by the United Nations Division for Sustainable Development (DSD), which has a mandate to provide leadership and catalyse action in promoting and coordinating implementation of internationally agreed development goals, including the seventeen Sustainable Development Goals (SDGs). <https://sustainabledevelopment.un.org>

generate considerable volumes of data that will be transmitted to CEB using internet protocols; this data will be analysed to improve understanding of intermittent renewable generation characteristics and consumer electricity usage, and will inform the modification of CEB's grid management strategies. Under Sub-component 3, OI DC staff and other stakeholders on Agalega, as well as OI DC staff on the mainland, will be trained in the installation, management and maintenance of small-island mini-grid systems.

51. The project will also facilitate involvement by relevant change agents, including research institutions and other stakeholders within the scientific and professional communities, and NGOs, who have built up collaborative relationships with local communities, particularly lower income ones.

V. FEASIBILITY

i. Cost efficiency and effectiveness:

52. The project is considered to be highly cost-effective, generating 4.27 million tCO₂e of direct and indirect emission reductions over the lifetimes of project investments at a cost to the GCF of USD 6.6/tCO₂e.
53. Sub-component 1 (support to MARENA) and Component 3 (Agalega PV) are not revenue-generating in any meaningful sense. Component 2 (rooftop PV) has revenue-generation aspects but is not driven by a commercial logic: the GCF support to rooftop PV is designed to ensure that lower-income stakeholders can benefit from this technology. The drive is not to “make money”.
54. Moreover, it is important to bear in mind that the GCF funds will be augmented by considerable loans provided as co-finance by AFD. Therefore, the project is proposing a package for investors consisting of a mix of grants, AFD loans and investors’ own resources. This mixture enables the project to mobilise more resources, over and above GCF funding, and hence scale-up the project to bring about the transformational change to energy systems being sought by the GCF.

ii. Risk Management:

55. The overall risk rating for this project is **moderate**. As per standard UNDP requirements, the Project Coordinator 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 probability is 1,2,3,4, 5 or when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported in the Annual Project.
56. The identified project risks are outlined in the Risk Log, compiled as [Annex 15](#) to this project document. The risk log also includes estimations of the probability of the risk occurring and the potential impact of the risk if it does occur. Risk mitigation measures are outlined in the log in order to minimise the likelihood of the risks occurring, and a risk owner is identified for each risk, to ensure accountability.

iii. Social and environmental safeguards:

57. The project has completed the UNDP social and environmental screening procedure (see SESP and accompanying management plan attached as [Annex 6](#)). This screening was undertaken to ensure the project complies with UNDP’s Social and Environmental Standards. UNDP’s Social and Environmental Standards were reviewed by the GCF Accreditation Panel and deemed sufficient to accredit UNDP to submit low- and medium-risk projects. The overall social and environmental risk category for this project is: **moderate**.
58. The impacts of rooftop solar PV systems are considered moderate as they are site-specific, temporary (e.g. installation and decommissioning), and can be easily mitigated by proper siting, technical specifications, and design and construction standards. Some considerations in selecting sites for the rooftop solar PV systems will include: (i) proximity to the existing power transmission system (i.e. grid connection), (ii) the integrity of the building (i.e. its capacity to hold additional load, to maintain roof water-tightness, etc.); (iii) existing land use in the area; (iv) local climate (i.e. the solar resource, the variability in cloud cover, wind-speed, precipitation, etc.), and (v) accessibility (i.e. proximity to existing roads).
59. Various technical standards and specifications for solar PV systems established by the International Electro-technical Commission (IEC), the Institute of Electrical and Electronics Engineers (IEEE), and other recognised standard-setting organisations will be referred to in order to ensure a degree of reliability and safety of operation, minimising the risk of system failure.

60. Given the type and scale of the rooftop PV systems addressed by the project, these technologies are exempted from the EIA requirements of Mauritius under the Environmental Protection Act (EPA, 2002 - amended 2008)³³ – see Annex VIb to the Funding Proposal.
61. With respect to household participation, a series of safeguards will be implemented to ensure sufficient social inclusion. Households will be selected on a first-come, first-served basis in defined consumer categories. A 50% quota for low-income households will be reserved in SSDG Phase 4 until 2022 and the rest for middle-income households, as defined by the Household Budget Survey of Statistics Mauritius. The Social Register will be used to target the low-income households. The proxy means test used by UNDP for the Social Register project³⁴ will be adapted to identify and restrict beneficiaries to lower socio-economic classes of Mauritian society.
62. A Sub-Board (for Sub-component 2) will oversee the quota for each category, taking into account level of income, gender, geographical coverage, and consumption of electricity. The quota definition will be objective and transparent. The list of beneficiaries will be submitted to the GCF as part of the M&E process. The Sub-Board will consider applying a graduated grant approach, to ensure poorer households could benefit from higher grant support than others.
63. Consultations with stakeholders will continue throughout the project cycle. A project-level grievance redress mechanism that is gender-sensitive following UNDP's SESP³⁵ will be set-up to deal with any potential complaint or grievance. A project brief (e.g., a one-page flyer or a set of frequently asked questions) that will include the contact details of person(s) designated to receive complaints and suggestions will be made available to the public on the project website and from the offices of UNDP, the Implementing Partner, and the Responsible Parties.
64. A record of compliance with applicable Government regulations will be submitted annually by the Executing Entity and Responsible Parties to UNDP. Documentation of any complaint received by the Executing Entity and Responsible Parties will also be submitted to UNDP.
65. Social and environmental complaints by communities and people affected by the project can also be submitted to UNDP's Social and Environmental Compliance Unit (SECU). SECU will respond to claims that UNDP is not in compliance with applicable environmental and social policies. Complaints can be submitted by e-mail to project.concerns@undp.org or the [UNDP website](#). Project-affected stakeholders can also request the UNDP Country Office for access to appropriate grievance resolution procedures for hearing and addressing project-related social and environmental complaints and disputes. Environmental and social grievances will be monitored and reported in the Annual Project Report.

iv. Sustainability and Scaling Up:

66. There are several enabling institutional, legal, and financial structures in place and others that will be developed over the course of the 8-year long project, to ensure benefits realised are sustained and to facilitate scaling up and replication moving forward.

Transition Arrangements under Sub-component 1: Institutional Strengthening for Renewable Energy

67. The Mauritius Renewable Energy Agency will be underpinned by a legal framework and an annual budget from Government, using a similar model to that adopted for the Energy Efficiency Management Office (EEMO) which was set up under the UNDP-supported, GEF-financed 'Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings' project. The long-term sustainability of MARENA will be assured through its mandate, as embodied in national law.

Transition Arrangements under Sub-component 2: Improving Grid Absorption Capacity and PV deployment

³³ <http://environment.govmu.org/English/eia/Pages/Environmental-Impact-Assessment.aspx>

³⁴ http://www.mu.undp.org/content/mauritius_and_seychelles/en/home/ourwork/povertyreduction/successstories/SRMsuccessstory.html.

³⁵ <http://www.undp.org/content/dam/undp/library/corporate/Social-and-Environmental-Policies-and-Procedures/UNDPs-Social-and-Environmental-Standards-ENGLISH.pdf>

68. The move to greater integration of intermittent renewables cannot be a short-term measure as the contracts that will be entered into with the Phase 4 SSDG Small Independent Power Producers (SIPPs) will be over 15 years as per normal practice in Mauritius. In addition, AFD will provide low-interest loans to rooftop PV adopters under SSDG Phase 4 to ensure sustained uptake. AFD will also provide concessional finance to enable CEB to further expand and maintain the network in view of a greater proportion of renewables on the grid, in accordance with Government targets. It is important to highlight that CEB will be able to re-invest the savings associated with avoided generation investment (through facilitating the ramp-up of IPP-generated renewable electricity instead of its own generation capacity to meet growing demand) in replacement batteries, since lithium-ion batteries have (predictable) finite lifetimes.

Transition Arrangements under Sub-component 3: PV mini-grid on the outer island of Agalega

69. The staff of the OI DC and selected inhabitants of Agalega will undergo the required capacity building in order to be able to maintain the equipment and budget for required maintenance. OI DC is committed to allocating the expected savings from the switch from diesel to PV (USD 106,000 per year) to long-term upkeep and expansion of the PV systems.

Financial viability in the long run beyond the Fund intervention

70. Under Sub-component 1, MARENA will be embedded in law and will receive an annual budget from Government. Therefore, unlike a departmental unit which exists only administratively in Government, MARENA is bound to have a long-term future with a specific, if not growing, mandate. The support to the deployment of PV following the improvement of Grid Absorption Capacity, as described in Component 2, will be a long-term feature beyond the project duration of 8 years because IPPs under the SSDG sign 15-year power purchase agreements with CEB. Moreover, as CEB has committed to allowing a greater proportion of intermittent renewable energy on the grid, enabled by the improvement of Grid Absorption Capacity, the presence of intermittent renewable energy will require regular and timely investment in BESS. As for Agalega, contrary to the main island of Mauritius, the electrification was carried out by a Government electrical maintenance department, with limited expertise in PV. In the context of the GCF project, CEB will be fully involved and will, therefore, be able to provide the required expertise and human resources. In addition, OI DC has committed to investing the savings incurred through the project in the establishment of a technical maintenance team.

Paradigm Shift Potential

71. The project will result in a real and visible paradigm shift in the Republic of Mauritius towards low-carbon sustainable development. The project directly addresses the largest-emitting sector in the country – i.e. energy generation – and implements actions specifically recommended in the Nationally Determined Contribution, the Second National Communication to the UNFCCC and the UNFCCC Technology Needs Assessment. There is significant potential for scaling up and replication as a result of the advances realised with the support of the GCF funding, as indicated by the estimated replication multiples presented below in **Table 4**.

Table 4: Scale-Up and Replication Multiples Arising from the GCF Project

Measure	GCF Direct Project Impact	Scale-Up / Replication Multiple
PV	25 MW of high-visibility rooftop PV installations	1.5
Improving Grid Absorption Capacity	25 MW PV installed	4

Potential for scaling up Rooftop PV

72. The partial grant support provided by the GCF to various categories of consumers will render rooftop solar PV a viable alternative for their energy needs. The highly-visible installations will have a cascading effect in terms of sensitisation and awareness of the population. This impact is difficult to quantify but can conservatively be estimated as a replication multiple of 1.5.³⁶

³⁶ GCF guidance is to use a default replication factor of 3 for investment projects that incorporate capacity building. Here, a conservative value of 1.5 is proposed.

Potential for scaling up Utility-Scale Grid-Connected Renewables

73. Once the enabling environment, in the form of improvements to the Grid Absorption Capacity and the creation of the Mauritius Renewable Energy Agency, has been created through GCF intervention, a key barrier to renewable power investment will have been overcome. There is already significant interest from a range of entities, including specialist power firms, industrial co-generators, NGOs and community groups, to establish themselves as grid-connected renewable energy IPPs. CEB estimates that an additional 125 MW of renewable energy generating capacity will be required over the coming 10 years (2015-2025) to meet energy demand and to meet national RE targets, of which 25 MW will be supplied by Phase 4 of the SSDG scheme. The 100 MW of utility-scale RE to be installed indirectly through the more conducive environment established by the GCF project represents a replication factor of 4.

v. Economic and Financial Analyses:

74. Detailed financial and economic analyses have been conducted for Sub-component 2 (separate analyses for the Improving Grid Absorption Capacity and SSDG Phase 4 elements), and Sub-component 3. Sub-component 1 involves the establishment and operationalisation of the Mauritius Renewable Energy Agency, and is structured to be an institutional capacity building component; consequently, financial and economic analyses are not considered pertinent for this sub-component at this stage. In the analyses carried out, all capital costs are deemed to be inclusive of project management costs. Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR) values have been computed for Sub-component 2 (both elements), and detailed inputs, assumptions and methodologies of these calculations are described in Annex XII to the Funding Proposal.

75. The expected financial and economic internal rates of return (FIRR and EIRR) for Components 2 (both elements) and 3 with GCF grants and without GCF grants are shown in **Table 5** below.

Table 5: GCF Project FIRRs and EIRRs

Project Component	FIRR (with GCF Grants)	FIRR (without GCF grants)	EIRR (with GCF grants)	EIRR (without GCF grants)
Sub-component 2 (CEB Improving Grid Absorption Capacity)	7.13% (hurdle rate 6.55%)	5.14% (hurdle rate 6.34%)	11.3% (hurdle rate 10%)	9.3% (hurdle rate 10%)
Sub-component 2 (25 MW grid-connected solar PV)	7.67% (hurdle rate 7.24%)	4.58% (hurdle rate 7.99%)	27.7% (hurdle rate 10%)	18.3% (hurdle rate 10%)
Sub-component 3 (Agalega mini-grids)	N/A	N/A	23.9% (hurdle rate 10%)	-9.4% (hurdle rate 10%)

76. Please note that, in the absence of guidance from the GCF on the selection of a specific economic discount rate to use in the economic analysis, all proposals supported by UNDP have opted to use a 10% discount rate, in line with the existing practice of multilateral development banks. Should the GCF request that all proposals submitted for review use the same discount rate and that this rate be other than 10%, we will be happy to revise the economic analysis accordingly.

77. Based on the financial structure and levels of GCF concessionality being requested, FIRR values for Sub-components 2 (both elements) and 3 are higher than the hurdle rate (the weighted average cost of capital – WACC), with positive Financial Net Present Values (FNPVs). While computing the hurdle rate (WACC), suitable values for alternative returns on equity from the perspective of each sub-component’s executing entity have been considered, along with the cost of debt and the sub-component’s financing structure. Sensitivity analyses of the project’s FIRR against key input and assumption values have also been conducted for Sub-components 2 (both elements) and 3, to assess the robustness of the Sub-components’ financial returns against unexpected changes to their input variables. For Sub-component 2 (Improving Grid Absorption Capacity element), FIRR values are lower than hurdle rates if the feed-in tariff to be paid by CEB or if interest rates on the debt portion of the Component’s financing structure increase. On the other hand, for the SSDG Phase 4 element of Sub-component 2, FIRR values are lower than hurdle rates if feed-in tariffs to be received by project developers from CEB decrease or if interest

rates on the debt portion of their financing structure increase. Hence, any increase or reduction in the feed-in tariff for solar projects needs to be carefully weighed by the Government to ensure financial returns to CEB for its improving Grid Absorption Capacity investment and financial returns to project developers for their solar PV investments remain attractive.

78. As described in Section D.1 of the Funding Proposal, the FIRR values of Sub-component 2 (both elements) are lower than their hurdle rates (negative NPV and hence financially unviable or not attractive) if the GCF grants are lower than those proposed.
79. As outlined in the letter of support from the international energy consultancy firm, Grue & Hornstrup (Annex XIII to the Funding Proposal), grid strengthening is increasingly required on electricity grids for voltage and frequency regulation in the context of intermittent renewable energy. Such strengthening is in the early stages of take-up, even in developed countries, and there is a strong rationale for the GCF to support early-stage adoption in developing countries. SIDS such as Mauritius tend to have the greatest need for grid strengthening due to their need to reduce fossil fuel consumption (for energy security and balance of payments reasons) while also having small and isolated – and therefore potentially unstable – grids. In the case of Mauritius, it should be noted that there is currently a pipeline of over 39 MW of Independent Power Producer (IPP) solar PV and wind generation that is legally, technically and financially clear to proceed but which is stalled simply because the grid is currently unable to absorb this volume of intermittent renewable energy. The introduction of the grid strengthening will unlock this private sector investment: for a modest GCF investment of USD 11 million, private investment of USD 70 million will be directly enabled. The grid strengthening is not ‘revenue-generating’ for the grid operator, CEB. It is, rather, better characterized as a ‘public good’: the grid strengthening will enable large-scale investment in renewable energy, but the proceeds from this investment will flow to IPPs, not to CEB. As a non-profit-making parastatal entity operating with socially-oriented electricity tariffs set externally (by the Government), CEB will be required to invest in grid strengthening with no opportunity for cost recovery. CEB’s investment budget is typically limited to approximately USD 135 million per year and it already faces significant medium-term costs – amounting to USD 514 million – for unrelated investments. Nonetheless, CEB has indicated that, should GCF support be forthcoming, it will specifically seek co-finance in order to implement the necessary grid strengthening measures.
80. For Sub-component 3, revenues cover only 5% of the ongoing operating costs and the remaining 95% of operating costs will be covered by Government grants to OI DC. Given the public good nature of this Sub-component, serving a remote and vulnerable community, the concessionality offered by a GCF grant to completely cover the capital costs of the three PV mini-grid installations is critical.
81. The proposed financing structure and GCF concessionality being requested for each of the components have been arrived at after careful consideration of other financing options, including debt and private sector financing. For example, in Sub-component 2 (Improving Grid Absorption Capacity element), the GCF grants being requested amount only to 38.5% of the overall capital costs, with the remainder being financed by a loan from AFD. Similarly, the financing structures of Sub-component 2 (25 MW solar PV under SSDG Phase 4).
82. Based on the proposed financial structure and levels of GCF concessionality being requested, EIRR values for Sub-components 2 (both elements) and 3 are higher than the hurdle rate (a discount rate of 10% is considered as the hurdle rate) with positive Economic Net Present Values (ENPVs). Sensitivity analyses of the project’s EIRR against a 20% increase in estimated costs and a 20% reduction in estimated economic benefits have also been conducted for Sub-components 2 (both elements) and 3, to assess the robustness of the Sub-components’ economic returns against unexpected changes to their input variables. EIRR values under sensitivity analyses for Sub-component 2 (25 MW PV element) are still above the discount rate of 10%. For Sub-component 2 (Improving Grid Absorption Capacity element), EIRR values are still higher than the hurdle rate even if investment costs increase by 20%, but EIRR values drop below the discount rate if estimated economic benefits are reduced by 20%. EIRR values under sensitivity analysis for Sub-component 3 (Agalega mini-grid) are negative if investment costs increase by 20% or estimated economic benefits decrease by 20%.

83. EIRR values of Sub-component 2 (Improving Grid Absorption Capacity element), and Sub-component 3 are lower than their hurdle rates (negative ENPV and hence economically unviable) if the GCF grants are lower than those proposed. However, the EIRR for Sub-component 2 (PV element) is still higher than the hurdle rate without GCF grants, even though the FIRR value is lower than the hurdle rate without the GCF grant for this Sub-component.

VI. PROJECT RESULTS FRAMEWORK

<p>This project will contribute to the following Sustainable Development Goal (s): SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all</p>
<p>This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: UNDAF OUTCOME: Design and Implementation of a portfolio of activities and solutions developed at national and sub-national levels for sustainable management of natural resources, integration of ecosystem services approaches, sound management of chemicals and waste while ensuring that climate change challenges in terms of adaptation and mitigation are fully addressed CPD 2017-2020 Output 1: Scaled up action on climate change mitigation across sectors which is funded and implemented</p>
<p>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</p>
<p>GCF Paradigm shift objectives: Shift to low-emission sustainable development pathways</p>

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
SDG indicators	Indicator 13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities	0	1	1	<ul style="list-style-type: none"> Government maintains policy of promoting low-carbon economy
	Indicator 7.2.1: Renewable energy share in the total final energy consumption	7.22% (in 2011) ³⁷	15	35	<ul style="list-style-type: none"> Government maintains policy of promoting RE
UNDP Strategic Plan Indicators	1. Indicator 1.4.2: Number of countries with comprehensive measures - plans, strategies, policies, programmes and budgets - implemented to achieve low-emission and climate-resilient development objectives	0	1	1	<ul style="list-style-type: none"> Government maintains policy of promoting low-carbon economy
	2. # direct project beneficiaries.	252,178	353,052	441,315	<ul style="list-style-type: none"> Grid Absorption Capacity improvement completed Based on estimate of low-emission MW divided by effective capacity of the power system, multiplied by

³⁷ Source: SDG Indicators Global Database, <http://unstats.un.org/sds/indicators/database>

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
					total number of households / household composition in Mauritius and Rodrigues
FUND LEVEL IMPACT:					
Fund level Impact: M1.0 Reduced emissions through increased low-emission energy access and power generation	Tonnes of carbon dioxide equivalent (tCO ₂ eq) reduced or avoided as a result of Fund funded projects / programmes	0	24,240 (direct)	196,000 (direct) 484,800 (indirect)	<ul style="list-style-type: none"> • Estimation over lifetime of project (8 years) and not equipment lifetime • CEB meets its target of a total of 185 MW installed capacity during project lifetime • Mid-term is end-2020 • The procurement process is efficient and timely • Low staff turnover for the duration of the project, ensuring there is no discontinuity • Phase 1 of the GCF project is completed on time and there is a smooth flow of funds into Phase 2
PROJECT OUTCOMES:					
Project Outcome: M5.0 Strengthened institutional and regulatory systems	Institutional and regulatory systems that improve incentives for low-emission planning and development and their effective implementation	Renewable Energy Agency existing at Board level only (MARENA)	Additional Legislation Enacted 10 Staff recruited	MARENA operational in 2019 MARENA staff fully trained	<ul style="list-style-type: none"> • Government remains committed to establishment of MARENA
Project Outcome: M6.0 Increased number of small, medium and large low-emission power suppliers	Proportion of low-emission power supply in a jurisdiction or market	20%	28%	35% in 2024	<ul style="list-style-type: none"> • Grid Absorption Capacity improvement completed
	Number of households, and individuals (males and females) with improved access to low-emission energy sources	83,000 households Males: 124,828 Females: 127,350	100,000 households Males: 174,760 Females: 178,292	129,500 households Males: 218,450 Females: 222,865	<ul style="list-style-type: none"> • Based on estimate of low-emission MW divided by effective capacity of the power system, multiplied by total number of households / household composition in Mauritius and Rodrigues
PROJECT OUTPUTS:					
PHASE ONE (2017-2019)		2017	2018	2019	
Project Output: 1.1 Institutional strengthening of the Mauritius Renewable Energy Agency	Renewable Energy Agency Act in place Institution staffed by mid-term	Legislation voted No staff contracted	Supplementary legislation – regulations and standards drafted 10 staff recruited,	MARENA functioning as a fully-fledged agency 15 staff recruited,	<ul style="list-style-type: none"> • Government maintains policy of promoting RE

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
			including at least 4 women	including at least 6 women	
Project Output: 2.1 Improving Grid Absorption Capacity to accept 185 MW intermittent RE	Software purchased Battery energy storage system procured	No AGC software installed No batteries Grid able to accept 60 MW	AGC software and batteries purchased and installed Grid able to accept 100 MW	All equipment installed and grid able to accept a total of 185 MW installed RE capacity	<ul style="list-style-type: none"> Government maintains policy of promoting RE
PHASE TWO (2020-24)		2020	2022	2024	
Project Output: 2.2 Smart grid	Advanced Distribution Management system Smart Grid Strategy	No ADMS	ADMS partly installed Long-term smart grid strategy under preparation	ADMS completely installed Long-term smart grid strategy developed	<ul style="list-style-type: none"> Government acknowledges the power stability benefits of smart grids and is keen to invest further
Project Output: 2.3 PV deployment	Actual MW installed by category (gender-disaggregated data)	5 MW PV under Phases 1, 2 and 3 of the SSDG 25 MW utility-scale PV on the grid	Additional 2 MW on grid from NGOs and 5 MW from households 5 MW from Public Buildings 65 MW PV utility-scale	4 MW capacity on grid from NGOs and 10 MW from households. 11 MW capacity installed on public buildings 130 MW utility-scale renewable energy	<ul style="list-style-type: none"> Price of fossil fuels does not fall markedly in the medium-term
Project Output: 3.1 PV mini-grids on the outer island of Agalega	Capacity of PV systems installed Number of OI DC staff trained	Existing systems are not functional No one trained	300 kW PV systems fully operational 3 females and 5 males trained	300 kW PV systems remain fully operational	<ul style="list-style-type: none"> OI DC is able to provide the budget for long-term maintenance and is supported by the Ministry of Ocean Economy

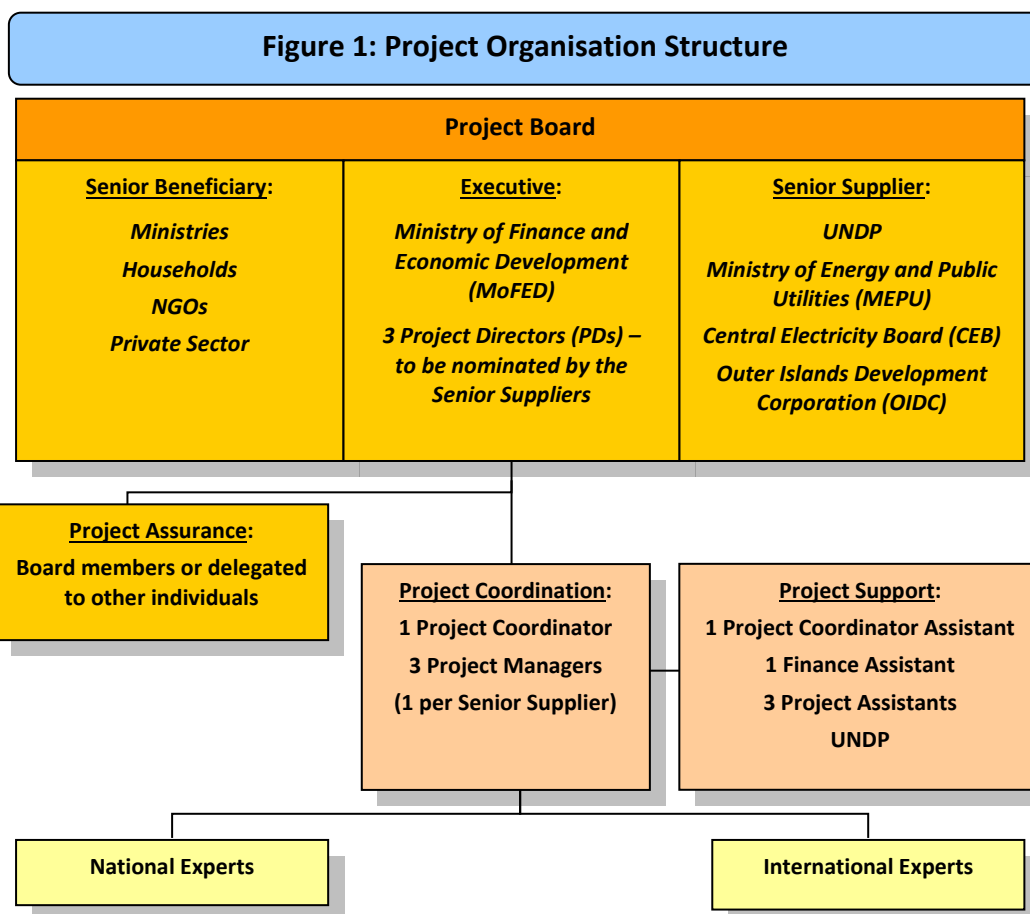
While no project activities are contained in this Resources Framework, a full list can be found in [Annex 11](#) – the timetable for project implementation

VII. MANAGEMENT ARRANGEMENTS

i. Roles and responsibilities of the project's governance mechanism:

84. The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement (SBAA) between UNDP and the Government of Mauritius signed in 1974 and the Country Programme Document (CPD).³⁸ The GCF project has been officially endorsed by the National Designated Authority, the Ministry of Finance and Economic Development (MoFED) – the Letter of No Objection is provided in Annex Ia. MoFED will oversee the project execution and ensure that it is implemented in accordance with the applicable national policies.
85. The Implementing Partner in UNDP terminology – the Executing Entity in GCF terminology – is the entity responsible and accountable for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP/GCF resources.
86. The Implementing Partner may enter into agreements with other organisations or entities, namely Responsible Parties, to assist in successfully delivering project outcomes. A Responsible Party is defined as an entity that has been selected to act on behalf of the Implementing Partner on the basis of a written agreement or contract to purchase goods or provide services using the project budget. In addition, the Responsible Party may manage the use of these goods and services to carry out project activities and produce outcomes. All Responsible Parties are directly accountable to the Implementing Partner in accordance with the terms of their agreement or contract with the Implementing Partner.
87. Responsible Parties for each sub-component under the GCF project are:
- Sub-component 1: Ministry of Energy and Public Utilities
 - Sub-component 2: Central Electricity Board
 - Sub-component 3: Outer Islands Development Corporation
88. The management arrangements for the project are summarised in the organisation chart below in **Figure 1:**

³⁸ The SBAA is provided in Annex XIIIu to the Funding Proposal. The CPD is provided in Annex XIIIv to the Funding Proposal.



89. **Project Board:** The Project Board (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Coordinator, including recommendations for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP’s ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager. The Project Board will meet on a semi-annual basis and will be responsible for decisions including:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the Project Coordinator.
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks.
- Agree on Project Coordinator’s tolerances as required.
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans.
- Subject to first-level approval by the Project Sub—Board, appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan.
- Triggering the project mid-term reviews (years 3 and 5) and terminal evaluation (year 8) and approval of the reports for submission to the GCF;
- Provide ad hoc direction and advice for exceptional situations when the Project Coordinator’s tolerances are exceeded.
- Assess and decide to proceed on project changes through appropriate revisions.
- Decisions on recruitment and contract extension decisions for project staff.

90. The composition of the Project Board must include the following roles:

- 1) **Executive:** The Executive is an individual who represents ownership of the project who will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP. The Executive is the MoFED:

The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organisation structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Coordinator;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organise and chair Project Board meetings.

- 2) **Senior Supplier:** The Senior Supplier is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required. If necessary, more than one person may be required for this role. Typically, the implementing partner, UNDP and/or donor(s) would be represented under this role. The Senior Supplier is made of the group of the following institutions: UNDP, MEPU, CEB, and O IDC.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;
- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

- 3) **Senior Beneficiary:** The Senior Beneficiary is an individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. The Senior Beneficiary role is held by a representative of the government or civil society. The Senior Beneficiary is the group consisting of the following: ministries, households, NGOs, and the private sector.

The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

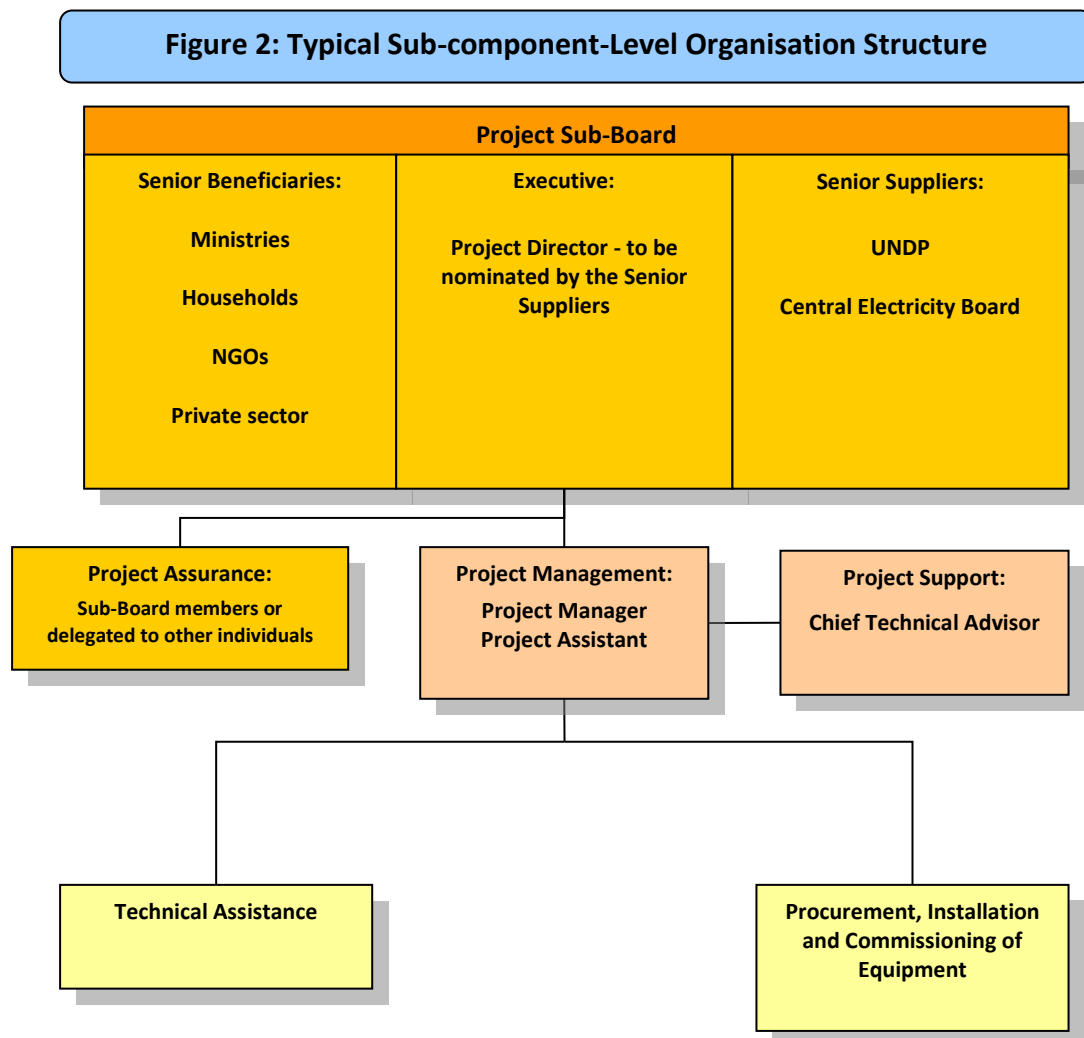
Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;

- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary’s needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;
- Risks to the beneficiaries are frequently monitored.

91. Each project sub-component will be overseen by a Project Director. Each Project Director will chair a Project Sub-Board focused on a specific project component. Each Sub-Board will consist of relevant stakeholders, and will be detailed in the UNDP Project Document. As with the Project Board, each Sub-Board is responsible for making, by consensus, management decisions when guidance is required by the Project Coordinator and/or relevant Project Manager. Project Sub-Board decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within a Sub-Board, final decisions shall rest with the Project Board. Each Project Sub-Board will meet on a quarterly basis.

92. At component level, the governing entity is the Project Sub-Board constituted as per the organogram below in **Figure 2** (example given for Sub-component 2):



93. Terms of reference for Project Management Unit staff are provided in Annexes XIIIk – XIIIl to the Funding Proposal. The function of the Project Management is illustrated below in **Figure 3**:

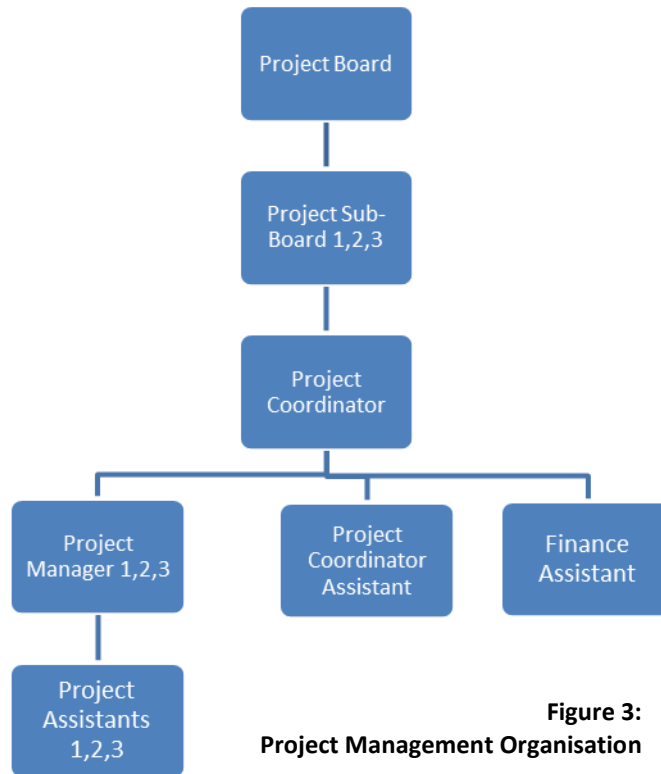


Figure 3:
Project Management Organisation

94. The **Project Coordinator**, based at the UNDP Country Office or at the Ministry of Finance and Economic Development (final decision to be made at the inception stage), will be responsible for the overall coordination of the project, timely recruitment of the four project managers by UNDP, and will ensure UNDP's support in all aspects of the project. UNDP will aim to ensure that there is the necessary synergy between the different project components. The Project Coordinator will quality control monitoring and evaluation documentation submitted to the GCF and will review annual budgets submitted by the Project Managers before transmission to the Project Directors. The Project Coordinator will be responsible for liaising with the relevant Project Directors and ensuring that the Project Managers deliver on their respective mandates, identify bottlenecks and bring a problem-solving approach to the delivery of the project. The Project Coordinator will also be responsible for mobilising the relevant UNDP support in respect of relevant operational aspects of the project. The Project Coordinator will be accountable to the Project Board for project execution. The Project Coordinator will have to inform the Board where there are grounds to believe that activities are not proceeding at the required pace and what remedial actions are required. The Project Coordinator will be employed on one-year renewable contracts and it will be the Board's decision whether extension of the contract is warranted each year.
95. The Implementing Partner appoints the Project Coordinator, who should be different from the Implementing Partner's representative in the Project Board. Specific responsibilities of the Project Coordinator include:
- Provide direction and guidance to project team(s)/ responsible party (ies);
 - Liaise with the Project Board to assure the overall direction and integrity of the project;
 - Identify and obtain any support and advice required for the management, planning and control of the project;
 - Responsible for project administration;
 - Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;

- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
 - Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
 - Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
 - Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
 - Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
 - Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
 - Capture lessons learned during project implementation;
 - Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available;
 - Prepare the Annual Project Report and submit the final report to the Project Board;
 - Based on the Annual Project Report and the Project Board review, prepare the AWP for the following year;
 - Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board;
 - Identify follow-on actions and submit them for consideration to the Project Board; and
 - Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board.
96. The **Project Managers** will run their respective sub-components on a day-to-day basis on behalf of the relevant Responsible Party within the constraints laid down by the Board and the Sub-Boards. The Project Manager function for sub-component 2 will end when the terminal evaluation report and other documentation required by the GCF and UNDP, have been completed and submitted to UNDP for the component under his/her responsibility. For Sub-components 1 and 3, the Project Manager function will end when envisaged results are satisfactorily achieved, as documented in midterm review reports 1 and 2, respectively, and approved by the Project Board.
97. The Project Managers are responsible for day-to-day management and decision-making for his/her project component, as well as monitoring materialized co-finance and reporting on this at project Sub-Board meetings. The Project Manager's prime responsibility is to ensure that the component produces the results specified in the Project Document, to the required standard of quality and within the specified constraints of time and cost. The relevant Responsible Party appoints the Project Manager, who should be different from the Responsible Party's representative on the Project Board and Sub-Board. Prior to the approval of the project, the Project Developer role is held by the UNDP staff member responsible for project management functions until the Project Coordinator and Project Managers are in place.
98. The three Project Managers will sit respectively at:
- The Ministry of Energy and Public Utilities (for Component 1);
 - The Central Electricity Board (for Component 2); and
 - The Ministry of Ocean Economy, Marine Resources, Fisheries, Shipping and Outer islands (for Component 3).
99. Under the overall guidance of the National Project Director and the direct supervision of the Project Coordinator, the **Project Coordinator Assistant** will provide project support services, ensuring high quality, accuracy and consistency of work. The Project Coordinator Assistant will work in close collaboration with the project and project staff as well as operations in the UNDP CO, UNDP Regional Service Centre and UNDP HQ as required and to exchange information and support project delivery.

100. Under the guidance and direct supervision of the Project Coordinator, the **Finance Assistant** will provide leadership in execution of financial services for the GCF project, ensuring effective and transparent utilisation of financial resources and integrity of financial services. The Finance Assistant will promote a client-oriented approach consistent with UNDP rules and regulations as well as those of the GCF. He/she will ensure full compliance with UN/UNDP rules, regulations and policies of financial activities, the financial recording/reporting system, follow-up on audit recommendations, implementation of effective internal controls, and proper functioning of a client-oriented financial resources management system.
101. Project assurance UNDP provides a three – tier supervision, oversight and quality assurance role – funded by the agency fee – involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager.
102. This project oversight and quality assurance role is covered by the accredited entity fee provided by the GCF. As an Accredited Entity to the GCF, UNDP delivers the following GCF-specific oversight and quality assurance services: (i) day to day project oversight supervision covering the start-up and implementation; (ii) oversight of project completion; and (iii) oversight of project reporting. A detailed list of the services is presented in the table below.

Function	Detailed description of activity	Typical GCF fee breakdown
Day-to-day oversight supervision	<p>1. Project start-up:</p> <ul style="list-style-type: none"> • In the case of Full Funding Proposals, prepare all the necessary documentation for the negotiation and execution of the Funding Activity Agreement (for the project) with the GCF, including all schedules • In the case of readiness proposals, if needed assist the NDA and/or government partners prepare all the necessary documentation for approval of a readiness grant proposal • Prepare the Project Document with the government counterparts • Technical and financial clearance for the Project Document • Organize Local Project Appraisal Committee • Project document signature • Ensure quick project start and first disbursement • Hire project management unit staff • Coordinate/prepare the project inception workshop • Oversee finalization of the project inception workshop report <p>2. Project implementation:</p> <ul style="list-style-type: none"> • <u>Project Board</u>: Coordinate/prepare/attend annual Project Board Meetings • <u>Annual work plans</u>: Quality assurance of annual work plans prepared by the project team; issue UNDP annual work plan; strict monitoring of the implementation of the work plan and the project timetable according to the conditions of the FAA and disbursement schedule (or in the case of readiness the approved readiness proposal) • <u>Prepare GCF/UNDP annual project report</u>: review input provided by Project Manager/team; provide specialized technical support and complete required sections 	70%

Function	Detailed description of activity	Typical GCF fee breakdown
	<ul style="list-style-type: none"> • <u>Portfolio Report (readiness)</u>: Prepare and review a Portfolio Report of all readiness activities done by UNDP in line with Clause 9.02 of the Readiness Framework Agreement. • <u>Procurement plan</u>: Monitor the implementation of the project procurement plan • <u>Supervision missions</u>: Participate in and support in-country GCF visits/learning mission/site visits; conduct annual supervision/oversight site missions • <u>Interim Independent Evaluation Report</u>: Initiate, coordinate, finalize the project interim evaluation report and management response • <u>Risk management and troubleshooting</u>: Ensure that risks are properly managed, and that the risk log in Atlas (UNDP financial management system) is regularly updated; Troubleshooting project missions from the regional technical advisors or management and programme support unit staff as and when necessary (i.e. high risk, slow performing projects) • <u>Project budget</u>: Provide quality assurance of project budget and financial transactions according to UNDP and GCF policies • <u>Performance management of staff</u>: where UNDP supervises or co-supervises project staff • <u>Corporate level policy functions</u>: Overall fiduciary and financial policies, accountability and oversight; Treasury Functions including banking information and arrangements and cash management; Travel services, asset management, and procurement policies and support; Management and oversight of the audit exercise for all GCF projects; Information Systems and Technology provision, maintenance and support; Legal advice and contracting/procurement support policy advice; Strategic Human Resources Management and related entitlement administration; Office of Audit and Investigations oversight/investigations into allegations of misconduct, corruption, wrongdoing and fraud; and social and environmental compliance unit and grievance mechanism. 	
Oversight of project completion	<ul style="list-style-type: none"> • Initiate, coordinate, finalize the Project Completion Report, Final Independent Evaluation Report and management response • Quality assurance of final evaluation report and management response • Independent Evaluation Office assessment of final evaluation reports; evaluation guidance and standard setting • Quality assurance of final cumulative budget implementation and reporting to the GCF • Return of any un-spent GCF resources to the GCF 	10%
Oversight of project reporting	<ul style="list-style-type: none"> • Quality assurance of the project interim evaluation report and management response • Technical review of project reports: quality assurance and technical inputs in relevant project reports • Quality assurance of the GCF annual project report • Preparation and certification of UNDP annual financial statements and donor reports • Prepare and submit fund specific financial reports 	20%
	TOTAL	100%

ii. Small-Scale Distributed Generation – Phase 3

103. The funds for the next cohort of SSDG installations will be transferred to CEB on a quarterly basis. For the USD 12.7 million of GCF funds³⁹ allocated to the SSDG scheme (grants to partially cover the upfront costs of PV system acquisition), approximately USD 138 million more are expected to be leveraged at minimum. This co-finance will consist of: (a) the residual cost of each PV system not covered by the GCF (of which, 37% is expected to be covered by AFD loans, the remainder through user self-financing) and CEB's payments (at marginal cost) to Small Independent Power Producers (SSIPs) for the electricity supplied by the SSIPs to the grid (USD 119 million in total). SSIP applicants (for example, households) will submit their application forms to CEB, which will then send its verification team to the applicant's premises to ensure that the installation complies with the Grid Code. Once CEB has carried out its verification, it will send the information to MEPU so that the Ministry may issue the SSDG licence. From that point onwards, the CEB SSDG Unit will, on a monthly basis, assess the amount of electricity produced by the SIPP and credit its electricity account on a net-metering basis.

iii. Direct Project Services as requested by Government:

104. Services provided to government directly under NIM The UNDP Country Office will also deliver a pre-determined set of project-specific execution services at the request of the Government. To ensure the strict independence required by the GCF and in accordance with the UNDP Internal Control Framework, these execution services should be delivered independent from the GCF-specific oversight and quality assurance services (i.e. not done by same person to avoid conflict of interest).

105. These execution services will be charged to the project budget in accordance with the [UNDP's Harmonized Conceptual Funding Framework and Cost Recovery Methodology](#). The letter of agreement for these direct project costs is included in Annex to this project document.

106. The government has requested UNDP to undertake the following services:

- Staff selection and recruitment of the Project Coordinator, Finance Assistant, and Project Coordinator Assistant;
- Staff human resource administration and management for the Project Coordinator, Finance Assistant, and Project Coordinator Assistant;
- Recurrent personnel management for the Project Coordinator, Finance Assistant, and Project Coordinator Assistant;
- Procurement of certain international consultants, including but not limited to the midterm reviewers and terminal evaluator;
- Procurement of certain goods and services; and
- Travel authorization for certain missions and settlement of travel expenses.

iv. Agreement on intellectual property rights and use of logo on the project's deliverables:

107. In order to accord proper acknowledgement to the GCF for providing grant funding, the GCF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GCF will also accord proper acknowledgement to the GCF as per the GCF branding guidelines.

v. Disclosure of information:

108. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy⁴⁰ and the GCF Disclosure Policy⁴¹.

³⁹ Exclusive of project management costs and agency fees.

⁴⁰ See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

⁴¹ See https://www.greenclimate.fund/documents/20182/184476/GCF_B.12_24_-_Comprehensive_Information_Disclosure_Policy_of_the_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb

vi. Carbon offsets or units:

109. As outlined in the AMA agreement between UNDP and the GCF, to the extent permitted by applicable laws and regulations, the Implementing Partner will ensure that any greenhouse gas emission reductions (e.g. in emissions by sources or an enhancement of removal by sinks) achieved by this project shall not be converted into any offset credits or units generated thereby, or if so converted, will be retired without allowing any other emissions of greenhouse gases to be offset.

VIII. MONITORING AND EVALUATION (M&E) PLAN

110. The project results as outlined in the project results framework will be monitored and reported annually and evaluated periodically during project implementation to ensure the project effectively achieves these results. A full monitoring, as well as evaluation plan have been included in [Annex 9](#) and [Annex 10](#) respectively
111. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP Evaluation Policy](#). While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GCF-specific M&E requirements will be undertaken in accordance with relevant GCF policies.
112. In addition to these mandatory UNDP and GCF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Workshop Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including national/regional institutes assigned to undertake project monitoring.
- i. **M&E oversight and monitoring responsibilities:**
113. **Project Coordinator:** The Project Coordinator, in conjunction with the Project Managers, is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Coordinator will ensure that all project staff members maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Coordinator will inform the Project Board, the UNDP Country Office and the UNDP-GEF Regional Technical Advisor of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.
114. The Project Coordinator, in conjunction with the Project Managers, will develop annual work plans to support the efficient implementation of the project. The Project Coordinator will ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the Annual Project Report, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. Environmental and social management plan, gender action plan etc..) occur on a regular basis.
115. **Project Board:** The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board 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 Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.
116. **Project Implementing Partner:** The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.
117. **UNDP Country Office:** The UNDP Country Office will support the Project Coordinator and Project Managers as needed, including through annual supervision missions. The annual supervision missions

will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key M&E activities including the Annual Project Report, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality.

118. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the [UNDP POPP](#). This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the Annual Project Report and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. Annual Project Report quality assessment ratings) must be addressed by the UNDP Country Office and the Project Coordinator.
119. Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP Regional Technical Advisor as needed. The project target groups and stakeholders, including the GCF NDA, will be involved as much as possible in project-level M&E.
120. The UNDP Country Office will support GCF staff (or their designate) during any missions undertaken in the country, and support any ad-hoc checks or ex post evaluations that may be required by the GCF.
121. The UNDP Country Office will retain all project records for this project for up to seven years after project financial closure in order to support any ex-post reviews and evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GCF.
122. UNDP-Global Environmental Finance Unit (UNDP-GEF): Additional M&E and implementation oversight, quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as outlined in the management arrangement section above.

ii. **Audit:**

123. The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.⁴² Additional audits may be undertaken at the request of the GCF.

iii. **Additional monitoring and reporting requirements:**

124. **Inception Workshop and Report:** A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:
 - a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
 - b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
 - c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
 - d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E;
 - e) Identify how project M&E can support national monitoring of SDG indicators as relevant;
 - f) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender action plan; and other relevant strategies;

⁴² See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>

- g) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- h) Plan and schedule Project Board meetings and finalize the first year annual work plan.

125. The inception report must be submitted to the GCF within six months of project start (i.e. project effectiveness). The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

126. GCF Annual Project Report: The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual project report covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance so that progress can be included in the report. The APR will include reporting of: environmental and social risks and related management plans, gender, co-financing and financial commitments, GCF 'conditions precedent' outlined in the FAA, amongst other issues.

127. The Annual Project Report will be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the report as appropriate. The quality rating of the previous year's report will be used to inform the preparation of the subsequent report.

128. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

129. Interim Independent Evaluation Report: An interim independent evaluation report will be completed by April 2019. The findings and responses outlined in the management response to the interim independent evaluation will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the evaluation process and the evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the UNDP Evaluation Resource Center (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Other stakeholders will be involved and consulted during the evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final interim evaluation report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

130. Final Independent Evaluation Report: A final independent evaluation report will be completed by July 2021. The final evaluation will take place upon completion of all major project outputs and activities. The final evaluation process will begin at least three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability.

131. The Project Manager will remain on contract until the final evaluation report and management response have been finalized. The terms of reference, the evaluation process and the final evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the [UNDP Evaluation Resource Center](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Additional quality

assurance support is available from the UNDP-GEF Directorate. The final evaluation report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The final evaluation report will be publicly available in English on the UNDP ERC.

132. The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC).

133. Final Report: The project’s final Annual Project Report along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

iv. Mandatory GCF M&E Requirements and M&E Budget:

134. Mandatory GCF M&E requirements are outlined below in **Table 6**, along with a breakdown of the USD 329,500 indicative M&E budget:

Table 6: Mandatory GCF M&E Requirements and M&E Budget

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ⁴³ (USD)		Time frame
		GCF grant	Co-financing	
Inception Workshop	UNDP Country Office	USD 11,000		Within 6 months of FAA effectiveness date
Inception Report and baseline assessments	Project Coordinator		None	Within 6 months off FAA effectiveness date
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework <i>(including hiring of external experts, project surveys, data analysis, etc.)</i>	Project Coordinator, in conjunction with Project Managers	Per year: USD 10,000 USD 80,000 total		Annually
Annual Project Report	Project Coordinator and UNDP Country Office and UNDP-GEF team	None	None	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	Per year: USD 5,000 USD 40,000 total		Annually or other frequency as per UNDP Audit policies
Lessons learned, case studies, and knowledge generation	Project Coordinator, in conjunction with Project Managers	Per year: USD		Annually
Monitoring of environmental and social risks, and corresponding	Project Coordinator UNDP CO	Per year: USD		On-going

⁴³ Excluding project team staff time and UNDP staff time and travel expenses.

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ⁴³ (USD)		Time frame
		GCF grant	Co-financing	
management plans as relevant				
Monitoring of gender action plan	Project Coordinator UNDP CO	Per year: USD 4,000 USD 32,000 total		On-going
Monitoring of stakeholder engagement plan	Project Coordinator UNDP CO	Per year: USD 4,000 USD 32,000 total		On-going
Addressing environmental and social grievances	Project Coordinator UNDP Country Office BPPS as needed			
Project Board meetings	Project Board UNDP Country Office Project Coordinator	Per year: USD 2,000 USD 16,000 total		At minimum annually
Supervision missions	UNDP Country Office	None ⁴⁴		Two per year
Oversight missions	UNDP-GEF team	None ⁴⁴		Troubleshooting as needed
GCF learning missions/site visits	UNDP Country Office and Project Coordinator and UNDP-GEF team			To be determined.
Interim independent evaluation and management response	UNDP Country Office and Project team and UNDP-GEF team	USD 37,500 per MTR USD 75,000 total		
Final Independent Evaluation and management response	UNDP Country Office and Project team and UNDP-GEF team	USD 43,500		At least three months before operational closure
Translation of MTR and TE reports into English	UNDP Country Office			N/A
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		USD 329,500		

IX. FINANCIAL PLANNING AND MANAGEMENT

i. Project Financing

135. The total cost of the project is USD 191.39 million, as broken down below in **Table 7**. This is financed through a GCF grant of USD 28.21 million, USD 1.38 million in cash co-financing to be administered by UNDP and USD 161.8 million in parallel co-financing. UNDP, as the GCF Accredited Agency, is responsible for the oversight and quality assurance of the execution of GCF resources and the cash co-financing transferred to the UNDP bank account only.

Table 7: Breakdown of Project Financing

⁴⁴ The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GCF Agency Fee.

Outputs (Sub-components)	Financing Institution				Total USD
	GCF Grant USD	Government Grant USD	AFD Loan USD	UNDP Grant USD	
1. Institutional strengthening for renewable energy	810,574	1,000,000		80,000	1,890,574
2. Improving Grid Absorption Capacity followed by PV deployment	24,365,281	122,000,000	37,900,000	1,000,000	185,265,281
3. PV mini-grids on the outer island of Agalega	628,149	900,000		300,000	1,828,149
Project Management	2,405,996	-		-	2,405,996
Total	28,210,000	123,900,000	37,900,000	1,380,000	191,390,000

ii. **GCF Disbursement schedule**

136. GCF grant funds will be disbursed according to the GCF disbursement schedule outlined in **Table 8**. The UNDP Country Office will submit an annual work plan to the UNDP-GEF Unit and comply with the GCF milestones in order for the next tranche of project funds to be released. All efforts must be made to achieve 80% delivery annually.

Table 8: GCF Disbursement Schedule

Phase	Disbursements	Amounts (in USD)
Phase 1	Disbursement 1	2,974,261
	Disbursement 2	4,220,060
	Disbursement 3	4,879,837
	Sub-total Phase 1	12,074,158
Phase 2	Disbursement 4	4,342,959
	Disbursement 5	3,921,617
	Disbursement 6	2,971,335
	Disbursement 7	4,037,786
	Disbursement 8	862,145
	Sub-total Phase 2	16,135,842
Total	28,210,000	

iii. **Budget Revision and Tolerance:**

137. GCF requirement: 10% of the total projected costs per year can be reallocated among the budget account categories within the same project output. Any budget reallocation involving a major change in the project's scope, structure, design or objectives or any other change that substantially alters the purpose or benefit of the project requires the GCF's prior written consent.
138. As outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board (within the GCF requirements noted above). Should such deviation occur, the Project Manager and UNDP Country office will seek the approval of the UNDP-GEF Unit.

139. Any over expenditure incurred beyond the available GCF grant amount will be absorbed by non-GCF resources (e.g. UNDP TRAC or cash co-financing).

iv. Refund to GCF:

140. Unspent GCF resources must be returned to the GCF. Should a refund of unspent funds to the GCF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

v. Project Closure:

141. Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP.⁴⁵ On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.

vi. Operational completion:

142. The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed.

143. Transfer or disposal of assets: In consultation with the NIM Implementing Partner and other parties of the project, UNDP programme manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file⁴⁶. In addition, the following GCF requirements must be followed: As stated in Clause 9.03 of the Funding Activity Agreement included in Annex^[1], the Accredited Entity shall inform the GCF, in the final APR, which steps it intends to take in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.

vii. Financial completion:

144. The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

145. The project is required to be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

⁴⁵ see <https://info.undp.org/global/popp/ppm/Pages/Closing-a-Project.aspx>

⁴⁶

See https://popp.undp.org/layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

[1] 23.04 of the AMA states: “ In relation to a Funded Activity that is a grant financed in whole or in part with GCF Proceeds, if any part of such grant is used to purchase any durable assets or equipment used to implement the relevant Funded Activity (such as vehicles or office equipment), upon completion of the Funded Activity or termination of the relevant FAA in accordance with its terms, the Accredited Entity shall take such steps in relation to such assets or equipment which it reasonably deems in the best interest of the continued operation of the Funded Activity taking into consideration the objectives of the Fund and the terms of the applicable SBAA.”

X. TOTAL BUDGET AND WORK PLAN

TOTAL BUDGET AND WORK PLAN (GREEN CLIMATE FUND & UNDP)			
Atlas Proposal or Award ID:	00105006	Atlas Primary Output Project ID:	00106328
Atlas Proposal or Award Title:	Accelerating the transformational shift to a low-carbon economy in the Republic of Mauritius		
Atlas Business Unit	MUS10		
UNDP-GEF PIMS No.	5681		
Implementing Partner	Ministry of Finance and Economic Development (MoFED)		

GCF Component /Atlas Activity	Responsible Party [1] (Atlas Implementing Agent)	Financing Source	Atlas Budgetary Account Code	ATLAS Budget Description	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Total (USD)	See old Budget Note :	
					Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8			
					(USD)	(USD)	(USD)	(USD)	(USD)	(USD)	(USD)	(USD)			
Component 1: Institutional strengthening for renewable energy	MEPU	GCF	71200	International Consultants	97,824	101,500	103,023	-	-	-	-	-	302,347	1	
			71600	Travel	5,000	5,000	5,000	-	-	-	-	-	-	15,000	2
			72100	Contractual Services-Companies	104,146	102,878	103,037	-	-	-	-	-	-	310,061	3
			72500	Supplies	16,000	15,000	15,000	-	-	-	-	-	-	46,000	4
			75700	Training, Workshops and Confer	48,222	48,222	48,222	-	-	-	-	-	-	144,666	5
				sub-total GCF Component 1		271,192	272,600	274,282	0	0	0	0	0	818,074	
		UNDP	72100	Contractual Services-Companies	20,000	20,000	40,000	0	0	0	0	0	0	80,000	6
		MEPU	71200	International Consultants	200,000	200,000	200,000	-	-	-	-	-	-	600,000	7
			73100	Rental & Maintenance-Premises	100,000	150,000	150,000	-	-	-	-	-	-	400,000	8
				sub-total co-finance 1		320,000	370,000	390,000	0	0	0	0	0	1,080,000	
		Total Component 1		591,192	642,600	664,282	0	0	0	0	0	1,898,074			
Component 2:	CEB	GCF	71200	International	50,000	50,000	50,000	79,502	-	-	-	-	229,502	9	

Improving Grid Absorption Capacity followed by PV deployment			Consultants												
		71300	Local Consultants	-	-	-	100,000	30,000	-	65,200	50,000	245,200	10		
		71600	Travel	5,000	5,000	5,000	5,000	5,000	5,000	5,000	4,000	39,000	11		
		72100	Contractual Services-Companies	2,262,755	3,589,432	4,202,466	3,490,227	3,147,510	2,706,853	3,710,872	503,964	23,614,079	12		
		72500	Supplies	13,000	14,000	15,000	15,000	15,000	15,000	14,000	14,000	115,000	13		
		75700	Training, Workshops and Confer	50,000	-	-	50,000	50,000	-	-	-	150,000	14		
			sub-total GCF Component 2	2,380,755	3,658,432	4,272,466	3,739,729	3,247,510	2,726,853	3,795,072	571,964	24,392,781			
		UNDP	72100	Contractual Services-Companies	400,000	300,000	300,000	0	0	0	0	0	1,000,000	15	
		CEB	72100	Contractual Services-Companies	500,000	1,000,000	500,000	24,000,000	24,000,000	24,000,000	24,000,000	24,000,000	122,000,000	16	
		AFD	72100	Contractual Services-Companies		9,350,000	9,350,000	3,840,000	3,840,000	3,840,000	3,840,000	3,840,000	37,900,000	17	
			sub-total co-finance 2	900,000	10,650,000	10,150,000	27,840,000	27,840,000	27,840,000	27,840,000	27,840,000	160,900,000			
			Total Component 2	3,280,755	14,308,432	14,422,466	31,579,729	31,087,510	30,566,853	31,635,072	28,411,964	185,292,781			
Component 3: PV mini-grids on the outer island of Agalega	OIDC	GCF	71600	Travel	-	-	-	5,000	5,000	-	-	-	10,000	18	
			72100	Contractual Services-Companies	-	-	-	266,742	289,911	-	-	-	556,653	19	
			72500	Supplies	-	-	-	13,000	13,000	-	-	-	26,000	20	
			75700	Training, Workshops and Confer	-	-	-	19,748	19,748	-	-	-	39,496	21	
				sub-total GCF Component 3	0	0	0	304,490	327,659	0	0	0	632,149		
			UNDP	71400	Contractual Services - Individ	0	0	0	150,000	150,000	0	0	0	300,000	22
			OIDC	71401	Contractual Services - Individ	-	-	-	180,000	180,000	180,000	180,000	180,000	900,000	23
					sub-total co-finance 3	0	0	0	330,000	330,000	180,000	180,000	180,000	1,200,000	
					Total Component 3	0	0	0	634,490	657,659	180,000	180,000	180,000	1,832,149	
Project Management	UNDP, MEPU, CEB, O IDC	GCF	61100	Salary Costs - NP Staff	114,000	115,710	117,447	119,207	120,995	122,810	124,653	126,522	961,344	24	
			71200	International Consultants	-	-	24,000	-	24,000	-	-	-	30,000	78,000	25

			71300	Local Consultants	18,000	18,000	24,000	18,000	24,000	18,000	18,000	24,000	162,000	26
			71400	Contractual Services - Individ	111,027	115,402	116,948	120,439	122,387	58,149	59,138	60,664	764,154	27
			71600	Travel	-	-	7,500	-	7,500	-	-	7,500	22,500	28
			72100	Contractual Services-Companies	6,000	6,040	8,500	8,500	8,500	8,500	8,500	8,500	63,040	29
			72200	Equipment and Furniture	5,410	-	-	-	-	-	-	-	5,410	30
			72400	Communic & Audio Visual Equip	2,000	-	-	-	2,000	-	-	-	4,000	31
			72500	Supplies	900	900	900	900	900	900	900	900	7,200	32
			72800	Information Technology Equipmt	14,350	-	-	-	4,000	4,600	-	-	22,950	33
			73100	Rental & Maintenance-Premises	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	48,000	34
			74100	Professional Services	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	40,000	35
			74500	Miscellaneous Expenses	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	96,000	36
			74596	Direct Project Cost-Staff	13,827	7,176	7,494	5,894	5,866	6,123	6,123	6,195	58,698	37
			75700	Training, Workshops and Confer	13,800	2,800	3,300	2,800	3,300	2,400	2,400	2,900	33,700	38
				Total Project Management	322,314	289,028	333,089	298,740	346,448	244,482	242,714	290,181	2,366,996	
				TOTAL GCF	2,974,261	4,220,060	4,879,837	4,342,959	3,921,617	2,971,335	4,037,786	862,145	28,210,000	
				TOTAL UNDP	420,000	320,000	340,000	150,000	150,000	-	-	-	1,380,000	
				TOTAL MEPU	300,000	350,000	350,000	-	-	-	-	-	1,000,000	
				TOTAL CEB	500,000	1,000,000	500,000	24,000,000	24,000,000	24,000,000	24,000,000	24,000,000	122,000,000	
				TOTAL AFD	-	9,350,000	9,350,000	3,840,000	3,840,000	3,840,000	3,840,000	3,840,000	37,900,000	
				TOTAL ODC	-	-	-	180,000	180,000	180,000	180,000	180,000	900,000	
				PROJECT TOTAL	4,194,261	15,240,060	15,419,837	32,512,959	32,091,617	30,991,335	32,057,786	28,882,145	191,390,000	

Budget Notes:

Note	Description of cost item
Component 1: Institutional strengthening for renewable energy	
1.	International consultant costs, covering the service of a chief technical advisor for years 1, 2, 3 based on a per day rate of USD 800. The CTA will assist the Ministry, MARENA and URA in the preparation of the roadmap for MARENA, and URA and also in terms of institutional set up. Estimated input of 80 person days per year. Cost of international consultant for Midterm evaluation at USD 700 per day.
2.	Travel expenses for South South cooperation exchange missions to at least 1 country which has an institution similar to MARENA .
3.	Consultancy for the preparation of legislation, development of IT platform information technology services for the development of an information management system, and renewable energy technical studies. Different companies will be hired. It is estimated that the cost of preparation of legislation will be in the order of USD 30K, as secondary legislation is concerned. Development of IT platform USD 90K for each of MARENA and URA. As for renewable energy technical studies about 100 person days at USD 800 per day
4.	Supplies for the MARENA and the Utility Regulatory Authority, including stationery, office supplies, publication of guidelines, website design/electronic media
5.	Training, meeting costs, workshop, and conference costs for capacity building of MARENA staff and Utility Regulatory Authority Staff. Estimated cost per meeting without venue USD 300, local conference costs USD 3000/day, training costs for capacity building for and delivered MARENA with special attention on gender 30K USD per year.
6.	Assistance from National Gender Expert and International Expert on Knowledge Management and Monitoring and Evaluation
7.	Cost of Consultants and salaries of Staff of MARENA provided from Government budget
8.	Rental of Premises for the MARENA
Component 2: Improving Grid Absorption Capacity followed by PV deployment	
9.	Consultancy services accompanying Battery Energy Storage System and Installation of Automatic Generation Control at USD 800 per day for 25 days per year. Also includes the services of the Mid Term Evaluation consultancy services at USD 700 per day.
10.	Consultancy services to assist in selection of beneficiaries to meet social requirements of the PV panels project; for developing a long-term smart grid strategy at USD 800 per day. Also includes cost of local consultant for the midterm and terminal evaluations at USD 500/day for ten days in each evaluation.
11.	Travel expenses for both international consultants and CEB staff
12.	Installation of the Automatic Generation Control (AGC) system by CEB and supplying and installing the Battery Energy Storage System (BESS) 18 MW Li-ion batteries at 0.7 M USD per MW, over 3 years in different supply contracts and installing the Advanced Distribution Management System. The ADMS will include deployment of a centralised self-healing Fault Location, Isolation, and System Restoration function along with deployment of communicable fault passage indicators and sectionalisers on MV feeders Provision of a grant to SSDG Phase 4 users to partially cover the upfront cost of investing in small- and medium-scale PV systems. For households, NGOs and public buildings, the grant will cover an average of approximately 27% of the upfront system and installation cost. The grant will cover 27% of the cost of 25 MW roof top PV systems at an average cost of USD 3/W.
13.	Supplies for Component 2, including stationery, office supplies, publication of guidelines, website design/electronic media. Contracts for stationery office supplies will be different from those for publication of guidelines. Current typical local cost of publication of guidelines USD 15 K, for website design 15 K USD. Costs to be spread over different years to be accommodated.
14.	Training for CEB and MEPU staff and public outreach using guidelines which will have been developed. Includes cost of training to be delivered by providers of

	AGC, BESS and ADMS. Estimated cost per meeting without venue USD 300, local conference costs USD 3000/day.
15.	Development of Ownership Models, economic studies connected thereto and Solar Map, Awareness raising activities, development of initial smart grid roadmap, contribution to Feed in Tariffs, substantive contribution of National Gender Expert, International expert on Knowledge Management, Monitoring and Evaluation
16.	Contribution to purchase of Battery Energy Storage System, and upgrade of the national grid
17.	Feasibility studies and contribution to purchase of Battery Energy Storage System as well as Smart Grid related equipment, and upgrade of the CEB grid to improve grid resilience for further absorption of intermittent renewable energy
Component 3 : PV mini-grids on the outer island of Agalega	
18.	Travel expenses for project team, Consultants and contractors supplying equipment
19.	Procurement and shipping of PV panels for 300 kW capacity at an estimated cost of \$3/W and batteries at estimated cost of \$200/kWh to Agalega and training of local inhabitants at 800 USD/day for maximum of 5 days
20.	Supplies, including stationery, office supplies, publication of guidelines, website design/electronic media
21.	Training, meeting costs, workshop, and conference costs for capacity building, for training of local inhabitants and OIIC staff. Estimated cost per meeting without venue USD 300, local conference costs USD 3000/day.
22.	Contribution from National Gender Expert and International Expert on Knowledge Management and Monitoring and Evaluation
23.	Cost of additional staff hired for long term maintenance of the PV system.
Project Management:	
24.	Salary costs at USD 961,344; including USD 566,687 for the Project Coordinator for 96 months at a monthly gross salary of USD 5,600, with a cost of living adjustment of 1.5% per year starting in year 2; USD 212,508 for the Finance Assistant for 96 months at a monthly gross salary of USD 2,100, with a cost of living adjustment of 1.5% per year starting in year 2 ; and USD 182,149 for the Project Coordinator Assistant for 96 months at a monthly gross salary of USD 1,800, with a cost of living adjustment of 1.5% per year starting in year 2.
25.	International consultants costs at USD 78,000, including USD 24,000 for midterm review No. 1 in year 3; USD 24,000 for midterm review No. 2 in year 5; and USD 30,000 for the terminal evaluation in year 8.
26.	Local consultants costs at USD 162,000, including USD 138,000 for a gender and social inclusion specialist at USD 716 per day and 2 days per month per year for each of the 8 years of implementation; and USD 18,000 for local consultant support for the two midterm reviews and terminal evaluation at USD 6,000 per review/evaluation.
27.	Contractual services (Individual) at USD 764,154 for project management personnel, with average monthly salaries of USD 3100 for project managers and USD 1770 for project assistants; including USD 111,600 for the Project Manager of Component 1 over 36 months for years 1, 2, and 3; USD 297,600 for the Project Manager of Component 2 over 96 months for years 1 through 8; USD 77,500 for the Project Manager for Component 3 over 25 months for years 4 and 5; USD 63,720 for the Project Assistant for Component 1 over 36 months for years 1, 2; USD 169,484 for the Project Assistant for Component 2 over 96 months for years 1 through 8; USD 44,250 for the Project Assistant for Component 3 over 25 months for years 4 and 5.
28.	Travel expenses for project staff and for consultancy services under general project management activities
29.	Cost of venues for trainings, meetings, especially in relation to public outreach. Estimated cost per meeting without venue USD 300, local conference costs

	USD 3000/day.
30.	Office equipment and furniture costs, for the project coordination unit office the three project management unit offices including
31.	Communication and audio visual equipment for all Components project management activities at including telephone, internet, insurance, etc. at USD 1,000 per month for 96 months.
32.	Office supplies and stationery over whole duration of project for the Project Coordination Unit
33.	Information technology equipment including 9 laptop computers; multifunction printer/scanner/etc. units replacement of 4 multifunction units in year 5 at USD 1,200 per unit
34.	Maintenance of premises for rental of the project coordination unit office.
35.	Audit/Spot Check cost in accordance with HACT rules based on expenditure levels as per UNDP Long Term Agreement
36.	Miscellaneous expenses at USD 96,000 for project coordination/management services, including telephone, internet, insurance, etc.
37.	Direct project costs –for staff selection and recruitment of staff HR and benefits administration at issuance of contract, staff HR and benefits administration at issuance of contract for 3 staff members, recurrent personnel management. The DPC also includes General Operational Expenditures.
38.	Workshop, training, conference related expenses such as catered venue for the two midterm reviews and terminal evaluation, debriefing meeting; catered venues for project board meetings, and two meetings per year for 8 years; and catered venues for the sub-board meetings.

XI. LEGAL CONTEXT

i. Additional legal conditions

146. Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.
147. By signing this UNDP GCF project document, the Implementing Partner also agrees to the terms and conditions of the GCF Funded Activity Agreement (FAA) included in Annex 1 and to use the GCF funds for the purposes for which they were provided. UNDP has the right to terminate this project should the Implementing Partner breach the terms of the GCF FAA.

ii. Legal Context Standard Clauses

148. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed on (date). All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”
149. This project will be implemented by Ministry of Finance and Economic Development (MoFED “Implementing Partner”) in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

iii. Risk Management Standard Clauses

150. Consistent with the Article III of the SBAA [*or the Supplemental Provisions to the Project Document*], the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP’s property in the Implementing Partner’s custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
 - b) assume all risks and liabilities related to the Implementing Partner’s security, and the full implementation of the security plan.
151. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner’s obligations under this Project Document.
152. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.
153. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).
154. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

155. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
156. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
157. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.
158. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.
159. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.
160. Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.
161. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement.
162. Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

163. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.
164. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

165. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled “Risk Management” are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled “Risk Management Standard Clauses” are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document

XII. MANDATORY ANNEXES

166. The following documents have been identified as mandatory for inclusion with the final project document package. Links provided below go either to the appended document or link directly to the gefpims database document for download.

1. [GCF Term sheet and Funding Activity Agreement](#)
2. [Direct project cost letter of agreement](#)
3. [Letter of agreement between the Implementing Partner and Responsible Parties](#)
4. [Letters of co-financing](#)
5. [Theory of Change Diagram](#)
6. (a) [Social and environmental screening procedure](#)
(b) [Environment and Social Management Plan](#)
7. [Gender analysis and action plan](#)
8. [Map of project location \(s\) with GPS coordinates](#)
9. [Monitoring Plan](#)
10. [Evaluation Plan](#)
11. [Timetable of project implementation](#)
12. [Procurement plan](#)
13. [Terms of reference for Project staff](#)
14. [UNDP Project Quality Assurance Report](#)
15. UNDP Risk Log
16. Results of the capacity assessment of the project implementing partner and [HACT micro assessment](#)

[Annex 1: GCF Term sheet and Funding Activity Agreement](#)**ent**

[FP-UNDP-201016-5681-Annex V \(Term Sheet\).zip](#)

[PIMS 5681 Executed FAA UNDP Mauritius June 8, 2017.pdf](#)



*Empowered lives.
Resilient nations.*

12 May 2017

**STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND
THE GOVERNMENT OF MAURITIUS**

FOR THE PROVISION OF SUPPORT SERVICES

Dear Mr. Manraj,

1. Reference is made to consultations between officials of the Government of Mauritius (hereinafter referred to as “the Government”) and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects namely the Green Climate Fund (GCF) funded project entitled “*Accelerating the Transformational Shift to a Low Carbon Economy in the Republic of Mauritius*”, executed by the Ministry of Finance and Economic Development, the Ministry of Energy and Public Utilities, the Central Electricity Board and the Outer Islands Development Corporation. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the project budget.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:

- (a) Simple procurement of goods (under 100,000 USD)
- (b) Complex procurement of goods (above 100,000 USD)
- (c) Simple recruitment (under 100,000 USD)
- (d) Complex recruitment (above 100,000 USD)
- (e) If recruitment of project personnel: administration of project personnel
- (f) Organization of travel and per diem for resource persons
- (g) Payments on behalf of Ministry

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

5. The relevant provisions of the UNDP Standard Basic Assistance Agreement with the Government of Mauritius (the "SBAA"), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.

7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

For the Government:

Mr. D. Manraj, GOSK
Financial Secretary
& GEF Operational Focal Point
Ministry of Finance and Economic Development

Signed on behalf of UNDP:

Mr. Simon Springett
UNDP Resident Representative

Attachment

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between Ministry of Finance and Economic Development, the institution designated by the Government of Mauritius and officials of UNDP with respect to the provision of support services by the UNDP country office for the Green Climate Fund (GCF) funded project entitled “Accelerating the Transformational Shift to a Low Carbon Economy in the Republic of Mauritius”, executed by the Ministry of Finance and Economic Development, the Ministry of Energy and Public Utilities, the Central Electricity Board and the Outer Islands Development Corporation.

2. In accordance with the provisions of the letter of agreement signed on and the relevant project document, the UNDP country office may provide support services to the above mentioned projects as described below.

3. Support services to be provided:

Support services	Item	Schedule for the provision of the support services	Unit Cost to UNDP of providing such support services	Amount (USD)	Amount and method of reimbursement of UNDP
Staff Recruitment	One time Recruitment of 7 project Staff,	At project initiation	586.14	4,689	Directly charged to project execution budget
Administration of project personnel comprising	Staff HR Benefits Admin at issuance of contracts	At project start	198.44	595	
	Staff HR Benefits Admin and Management at separation	At project closure	198.44	595	
	Recurrent Personnel management	Annual	447.44	10,739	
2. General Operating processes	Payment process (including setting up vendors)	Throughout project life based on prices as at project approval	36.10	2,347	
	Recruitment of consultants		228.29	7,990	
	Travel Authorisation		33.36	7,673	
	F10 settlement		30.53	7,022	
	Procurement process not involving CAP (less than 100,000 USD)		524.49	8,392	
	Procurement process involving CAP (more than 100,000 USD)		206.76	5,996	
	Procurement of Goods and Services low value		42.23	2,660	

Total					58,698	
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Direct Project Costs Schedule

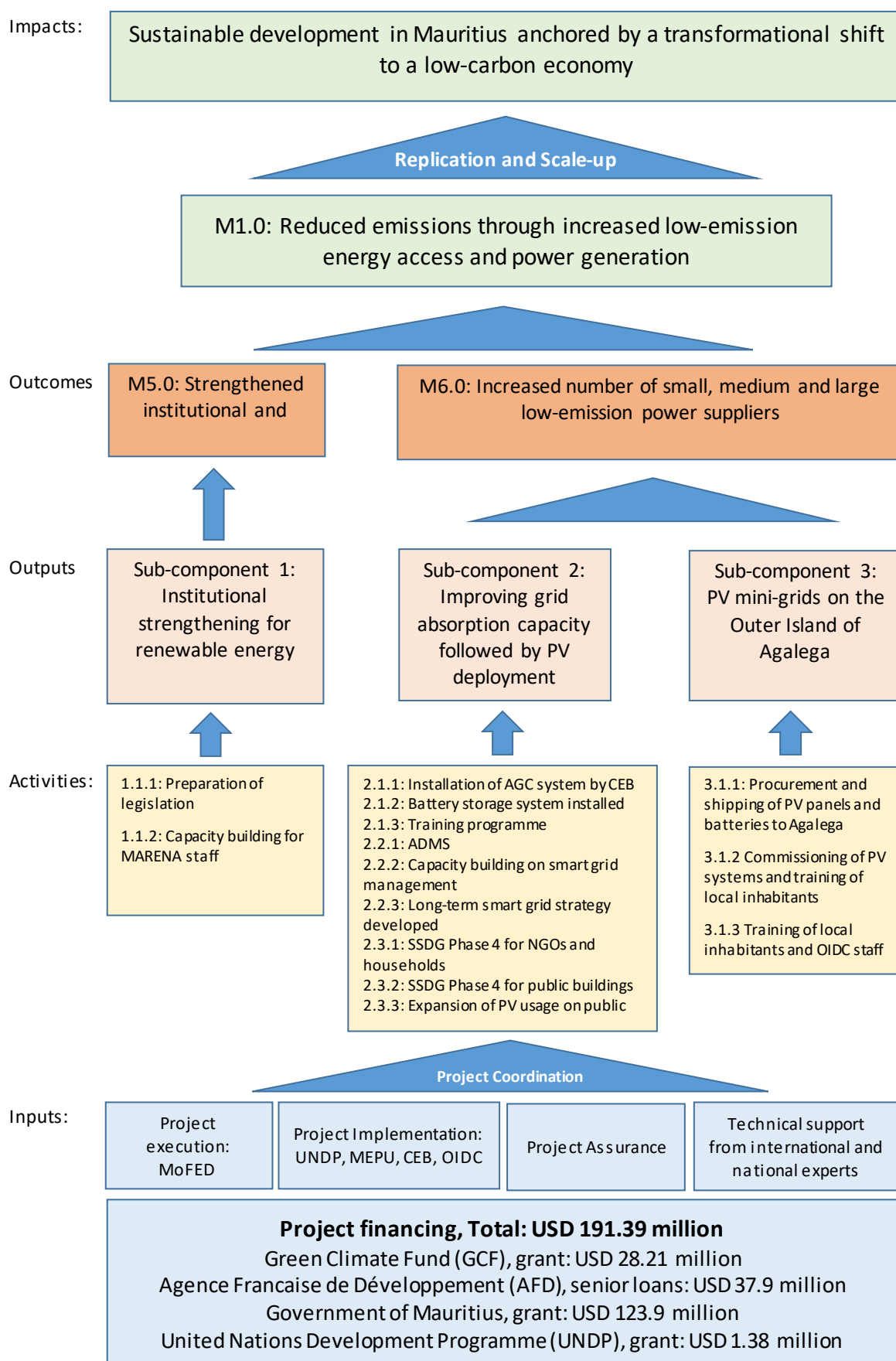
Year	2017	2018	2019	2020	2021	2022	2023	2024
Amount (USD)	13,827	7,176	7,494	5,894	5,866	6,123	6,123	6,195

Annex 3: Letter of agreement between the Implementing Partner and Responsible Parties
Under preparation

Annex 4: Letters of co-financing

[FP-UNDP-201016-5681-Annex IV \(Co-financing letters\).zip](#)

Annex 5: Theory of Change Diagram



Annex 6 (a): Environment and Social Screening

[FP-UNDP-201016-5681-Annex VI \(ESIA\).zip](#)

Accelerating the Transformational Shift to a Low Carbon Economy in the Republic of Mauritius

Disclaimer

This draft Environmental and Social Management Plan (ESMP) has been prepared for the submission of the proposal to the Green Climate Fund (GCF) for the purposes of assisting in the assessment of the potential environmental and social impacts of the proposal. This Environmental and Social Management Plan has been prepared prior to undertaking an Environmental and Social Impact Assessment (ESIA). Normally, an Environmental and Social Management Plan would be prepared following baseline studies and then the subsequent impact assessment contained within the Environmental and Social Impact Assessment would form the basis for the construction and operational environmental and social management plans.

As no Environmental and Social Impact Assessment have been undertaken for the project, this Environmental and Social Management Plan has been prepared solely on the author's experience with projects of this nature and in consideration of international good practice for these types of projects, as well as the Social and Environmental Screening Procedure (SESP) submitted as part of the proposal of the United Nations Development Programme (UNDP) submitted as part of the proposal. Accordingly, the ESMP will be subject to change following the preparation of the ESIA(s).

Assumptions

The following assumptions have been made in the preparation of this draft Environmental and Social Management Plan:

1. Following the modifications made to the project in relation to assistance to IPPs and Medium-Scale Distributed Generation, ESIA is no longer required.
2. None of the activities to be funded by the GCF will require ESIA as per correspondence from the Ministry of Environment, Sustainable Development, Disaster and Beach Management (MOE).
3. None of the activities will require the displacement of people.
4. None of the activities will be conducted in sensitive locations.
5. There will be no release of pollution and/or chemicals as a result of the project.

Acronyms

AFD	Agence Francaise de Developpement
ASTM	American Society for Testing and Materials
CEB	Central Electricity Board
CPD	Country Programme Document
EIA	Environment Impact Assessment
EPA	Environment Protection Act
EPC	Engineering, Procurement, Construction
ESIA	Environment and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
Euribor	Euro Interbank Offered Rate
FIT	Feed-in Tariff
GCF	Green Climate Fund
GHG	Greenhouse Gas
GN	Government Notice
GPS	Global Positioning System

IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
INDC	Intended Nationally Determined Contributions
IPPs	Independent Power Producers
IRR	Internal Rate of Return
kW	Kilowatt
kWp	kilowatts peak
MARENA	Mauritius Renewable Energy Agency
MEPU	Ministry of Energy and Public Utilities
MOE	Ministry of Environment, Sustainable Development, Disaster and Beach Management
MOFED	Ministry of Finance and Economic Development
MSDG	Medium-Scale Distributed Generation
MW	Megawatt
NGO	Non-Governmental Organisation
NIM	National Implementation Modality
PV	Photovoltaic
NTA	National Transport Authority
NDA	National Designated Authority
O&M	Operations and Maintenance
OIDC	Outer Islands Development Corporation
SBAA	Standard Basic Assistance Agreement
SECI	Solar Energy Corporation of India
SECU	Social and Environmental Compliance Unit
SES	Social and Environmental Standards
SESP	Social and Environmental Screening Procedure
SME	Small and Medium Enterprise
SRM	Stakeholder Response Mechanism
SSDG	Small Scale Distributed Generation
tCO₂e	Tons of Carbon Dioxide equivalent
UL	Underwriters Laboratories
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Glossary

Kilowatt peak (kWp) amount of power the solar panel will produce. tCO₂e a measure used to compare the emissions from various greenhouse gases based upon their global warming potential

Environmental and Social Management Plan for the GCF Project: Accelerating the Transformational Shift to a Low Carbon Economy in the Republic of Mauritius

Introduction

1. This document is a Draft Environmental and Social Management Plan (ESMP) for the 'Accelerating the Transformational Shift to a Low Carbon Economy' project submitted to the Green Climate Fund for funding. The project will deliver clean energy to 441,000 people in the Republic of Mauritius and contribute to mitigating climate change. Please refer to the Funding Proposal and Annexes thereof for details of the project.

Brief Description of the Project

2. The project will be implemented in two phases so that funds can be disbursed in a logical and appropriate manner without burdening the GCF or the executing agencies. Phase 1 will be implemented between 2017-2019; Phase 2 will be implemented between 2020-2024.
3. Under Phase 1 (2017-2019), the following components will be executed:
 - Component 1: Institutional strengthening for renewable energy (GCF finance: US\$ 1.1 million; co-finance: US\$ 1.08 million)
 - Component 2, Phase 1: Grid Strengthening and PV deployment (GCF finance: US\$ 10.9 million; co-finance: US\$ 20 million)
4. Under Phase 2 (2020-2024), the following components will be executed:
 - Component 2, Phase 2: Grid Strengthening and PV deployment (GCF finance: US\$ 15.4 million; co-finance: US\$ 140.9 million)
 - Component 3: PV mini-grids on the Outer Island of Agalega (GCF finance: US\$ 0.81 million; co-finance: US\$ 1.2 million)

Component 1: Institutional strengthening for renewable energy

5. With the assistance of the GCF project, the Ministry of Energy and Public Utilities (MEPU) will receive the necessary assistance to develop a fit-for-purpose legal and regulatory framework to allow the ambitious scale-up of renewable energy in Mauritius. The principal outcome of Component 1 will be the emergence of a strengthened institutional and regulatory system for renewable energy i.e. of the Mauritius Renewable Energy Agency (MARENA), which will directly facilitate the implementation of Component 2. By the end of Component 1 (2019), the Government will have the required legal texts, systems and institutional capability to effectively manage the evolution and growth of the renewable energy sector. The promotion of renewable energy technologies and a better understanding of the sector from an investor's perspective are expected to result in reduced GHG emissions through the scale-up of renewable power generation, both centralised and decentralised, at a national scale.

Component 2: Grid Strengthening and PV Deployment

6. With the assistance of the GCF project, CEB will be enabled to acquire and install the equipment necessary to ensure 185 MW of intermittent renewable energy can be connected to the grid without jeopardising grid stability. The GCF project will provide technical and financial support to the required grid strengthening through US\$ 10.9 million of GCF finance and US\$ 20 million of co-finance (US\$ 1 million grant from UNDP, US\$ 17 million of concessional lending from AFD and a contribution of US\$ 2 million from CEB).
7. 25 MW of this power will be supplied by PV installations facilitated through a GCF-supported Phase 3 of the SSDG scheme, with households supplying 5 MW, public buildings and NGOs 9 MW, and commercial entities 11 MW (see Table 6 below). 21 MW will be governed by the terms of the Small-Scale Distributed Generation grid code (installations up to 50 kW – see Annex XIIIb of the Funding Proposal) and 4 MW by the Medium-Scale Distributed Generation (MSDG) grid code (installations between 50 kW-2 MW). The 2 MW MSDGs will be subject to the ESIA requirement. The remaining 100 MW of renewable energy capacity will be installed by CEB and Independent Power Producers at utility-scale (installations greater than 2 MW) according to CEB's standard tender process. Over 39 MW of such utility-scale power has already been pipelined but has been unable to proceed because of the grid stability constraints.

8. To be clear, the GCF project will facilitate a total capacity of 185 MW of renewable energy on the Mauritian grid through its support to grid strengthening. Of this 185 MW, 25 MW will be directly facilitated by the GCF project through its support to a third phase of the SSDG scheme. The GCF project will enable the residual 100 MW (through grid strengthening) but will not be directly involved in financing or supporting these utility-scale installations. Table 1 below presents the expected number of SSDG Phase 3 beneficiaries.

Table 1: SSDG Phase 3 User Categories

Category of User	Total MW Allocated	Number of Beneficiaries	Average Size of System
Households	10 MW	2,800 – 5,000	2 kWp – 3.5 kWp
NGOs	4 MW	8 – 20	200 kWp – 500 kWp
Public buildings (including schools, charitable institutions, orphanages, etc.)	11 MW	1,400 – 2,200	5 kWp
Total	25 MW		8 kWp – 14 kWp

9. GCF resources will be used to provide a grant to SSDG Phase 4 users to partially cover the upfront cost of investing in small- and medium-scale PV systems. For households, NGOs and public buildings, the grant will cover an average of approximately 27% of the upfront system and installation cost (with the balance coming from loans (AFD) or users' own resources), as it is considered to be a more equitable approach than a FiT (which will be discontinued in Phase 4 of the GCF-supported SSDG scheme)⁴⁷ to ensure scaled-up adoption of small-scale PV.
10. The eligibility of beneficiary households will be determined by CEB using established (not project-specific) rules and criteria in terms of: (a) the income level of the beneficiary household and (b) technical compliance of the proposed rooftop PV system with CEB requirements (grid capacity, solar radiation, health and safety, metering set-up, etc.) under the technical rules of the SSDG Scheme.
11. Households will be selected on a first-come, first-served basis in defined consumer categories. A 50% quota for low-income households will be reserved in SSDG Phase 4 until 2022, and the rest for middle-income households, as defined by the Household Budget Survey of Statistics Mauritius. The Social Register will be used to target the low-income households. The proxy means test used by UNDP for the Social Register project⁴⁸ will be adapted to identify and restrict beneficiaries to lower socio-economic classes of Mauritian society. The term 'proxy means test' is used to describe a situation where information on household or individual characteristics correlated with welfare levels is used in a formal algorithm to proxy household income, welfare or need. The Proxy Means Test is already used to identify and assess eligibility for the new 'Child Allowance' Scheme and a Social Register software system has been developed to register and assess applications for social benefits.
12. A Sub-Board (for Component 2) will oversee the quota for each category, taking into account level of income, gender, geographical coverage, and consumption of electricity. The quota definition will be objective and transparent. The list of beneficiaries will be submitted to the GCF as part of the M&E process. Overall, these grant resources will represent just ~6% of the total investment cost associated with the expected 185 MW of renewable energy to be installed by 2024. In addition to the upfront grant provided by GCF resources, AFD will, if the GCF project is approved, establish a loan scheme for PV adopters under SSDG Phase 3 so that the residual (post-grant) purchase price of the PV systems can be borrowed and then repaid in instalments. The AFD loan will be at 2.86% assuming current Euribor levels.
13. Augmenting these PV installations, smart grid equipment will be installed so as to optimally manage the generation output of the rooftop solar PV installations and thereby lay the basis for a smart grid at national scale. The results of the implementation of the smart grid will then inform CEB on the requirements for national-scale smart grid deployment and the development of a strategy accordingly.

⁴⁷ SSDG Phase 4 adopters - small-scale IPPs - will function under the Net Metering Scheme: their PV-generated electricity will be exported to the grid and will offset their monthly energy imported from the grid; excess energy will be banked in the form of kilowatt-hour (kWh) credits. These credits can be used when the customer's system is not generating enough electricity to meet her/his demand and can be cashed at the end of the contract.

⁴⁸

http://www.mu.undp.org/content/mauritius_and_seychelles/en/home/ourwork/povertyreduction/successstories/SRMsuccesstory.html.

Component 2: Goals and Anticipated Outcomes

14. Implementation of this component will result in reduced GHG emissions through increased access to low-emission energy and power generation. By the end of Component 2, 161,600 tCO₂e will have been directly avoided due to the installation of 25 MW PV directly assisted by the GCF project. An additional 3.2 million tCO₂e are expected to be indirectly avoided as a result of expansion of intermittent renewables permitted by the grid strengthening activities. Taken over the entire population of Mauritius and Rodrigues (396,335 households), Component 2 will enable one-third (129,500) of households to have access to low-emission energy.

Component 3: PV mini-grids on the outer island of Agalega

15. The argument for introducing PV power on Agalega is very clear. As outlined in a PV assessment study commissioned by UNDP in 2010 (Annex IId of the Funding Proposal) and a later costing study (Annex Iie of the Funding Proposal), with Agalega's insolation and electricity demand profile, hybrid mini-grids serving the three villages could source ~80% of their electricity from solar power, requiring only relatively minor injections of diesel power. This would result in financial savings to OIIC of US\$ 106,000 per year – resources that OIIC is committed to allocating to long-term upkeep and expansion if given the opportunity. The principal barrier preventing the three villages of Agalega from operating solar-diesel hybrid mini-grids is technical capacity. A number of PV systems have been mothballed since 2009 because of a lack of trained technicians to maintain the system.

Component 3: Goals and Anticipated Outcomes

16. The principal goal of Component 3 will be to transform Agalega into the first low-emission inhabited island in the Republic of Mauritius. Approximately 300 inhabitants will benefit from this development, which will involve rehabilitation of the existing PV systems where feasible, and the installation of an additional 300 kW of PV panels and accompanying battery storage (diesel will only be required as back-up) on the existing mini-grid infrastructure. Training will be provided to 3 technical staff on the island and an additional 5 staff on the mainland to act as back-up and to provide logistical support in the event of new equipment being required.

Implementation Arrangements

17. The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement (SBAA) between UNDP and the Government of Mauritius signed in 1974 and the Country Programme Document (CPD). The GCF project has been officially endorsed by the National Designated Authority, the Ministry of Finance and Economic Development (MOFED) – the Letter of No Objection is provided in Annex Ia of the Funding Proposal. MOFED will oversee the project execution and ensure that it is implemented in accordance with the applicable national policies. The Implementing Partner in UNDP terminology – the Executing Entity in GCF terminology – is the entity responsible and accountable for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP/GCF resources.
18. The Implementing Partner may enter into agreements with other organisations or entities, namely Responsible Parties, to assist in successfully delivering project outcomes. A Responsible Party is defined as an entity that has been selected to act on behalf of the Implementing Partner on the basis of a written agreement or contract to purchase goods or provide services using the project budget. In addition, the Responsible Party may manage the use of these goods and services to carry out project activities and produce outcomes. All Responsible Parties are directly accountable to the Implementing Partner in accordance with the terms of their agreement or contract with the Implementing Partner.
19. Responsible Parties under the GCF Project are:
 - Component 1: Ministry of Energy and Public Utilities
 - Component 2: Central Electricity Board
 - Component 3: Outer Islands Development Corporation (OIIC)

Governing Legislation – Requirement for EIA

20. The *Environment Protection Act 2002 (amended 2008)* provides the regulatory management of ESIA in the Republic of Mauritius. Under the EPA, power generation and transmission activities are required to have an environmental impact assessment (EIA). However, due to the type and scale of the small-scale rooftop PV systems, Agalega mini-grids being proposed under the GCF project, these components are exempted from an EIA. This exemption was confirmed in writing on 1 July 2015 by the Director of Environment, Ministry of Environment, Sustainable Development, Disaster and Beach Management.

Accredited Agency Rules– UNDP Social and Environmental Screening

21. In June 2014, UNDP adopted mandatory the Social and Environmental Screening Procedure (SESP) and the Social and Environmental Standards (SES)⁴⁹ to provide guidance to their programmes and projects. The SESP and SES became effective on 1 January 2015 and are applicable to all UNDP projects with a budget of US\$ 500,000 or more. The Standards are underpinned by an Accountability Mechanism with two key components:
- A Social and Environmental Compliance Unit (SECU)⁵⁰ to respond to claims that UNDP is not in compliance with applicable environmental and social policies; and
 - A Stakeholder Response Mechanism (SRM)⁵¹ that ensures individuals, peoples, and communities affected by projects have access to appropriate grievance resolution procedures for hearing and addressing project-related complaints and disputes.
22. UNDP's Social and Environmental Standards (SES) underpin UNDP's commitment to mainstream social and environmental sustainability in its Programmes and Projects to support sustainable development. The SES strengthen UNDP's efforts to attain socially and environmentally beneficial development outcomes and present an integrated framework for achieving a consistent level of quality in UNDP's programming.
23. The objectives of the SES are to:
- Strengthen the social and environmental outcomes of UNDP Programmes and Projects
 - Avoid adverse impacts to people and the environment
 - Minimize, mitigate, and manage adverse impacts where avoidance is not possible
 - Strengthen UNDP and partner capacities for managing social and environmental risks
 - Ensure full and effective stakeholder engagement, including through a mechanism to respond to complaints from project-affected people
24. Through the Accreditation Process, the SES are acknowledged to be in line with the GCF's Environment and Social Standards. The SES can be downloaded at the following website address: <http://www.undp.org/content/undp/en/home/librarypage/operations1/undp-social-and-environmental-standards/>

The GCF Environment and Social Safeguards - GCF/B.07/11

25. At its Board meeting dated 19 June 2014, the GCF adopted the IFC standards as Interim environmental and social safeguards. The eight Performance Standards (PS) and the objectives of each are described below.
26. PS1: Assessment and management of environmental and social risks and impacts:
- a) Identify funding proposal's environmental and social risks and impacts;
 - b)
 - c) Adopt mitigation hierarchy: anticipate, avoid; minimize; compensate or offset;
 - d)
 - e) Improve performance through an environmental and social management system;
 - f)
 - g) Engagement with affected communities or other stakeholders throughout funding proposal cycle. This includes communications and grievance mechanisms.
27. PS2: Labour and working conditions
- a) Fair treatment, non-discrimination, equal opportunity;
 - b) Good worker–management relationship;
 - c) Comply with national employment and labour laws;
 - d) Protect workers, in particular those in vulnerable categories;

⁴⁹ <http://www.undp.org/content/undp/en/home/librarypage/operations1/undp-social-and-environmental-standards/>

⁵⁰ <http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm/social-and-environmental-compliance-unit.html>

⁵¹ <http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm/stakeholder-response-mechanism.html>

- e) Promote safety and health;
- f) Avoid use of forced labour or child labour.

28. PS3: Resource efficiency and pollution prevention

- a) Avoid, minimize or reduce project-related pollution;
- b) More sustainable use of resources, including energy and water;
- c) Reduced project-related greenhouse gas emissions.

29. PS4: Community health, safety and security

- (a) To anticipate and avoid adverse impacts on the health and safety of the affected community;
- (b) To safeguard personnel and property in accordance with relevant human rights principles

30. PS5: Land acquisition and involuntary resettlement

- (a) Avoid/minimize adverse social and economic impacts from land acquisition or restrictions on land use:
 - I. Avoid/minimize displacement;
 - II. Provide alternative project designs;
 - III. Avoid forced eviction.
- (b) Improve or restore livelihoods and standards of living;
- (c) Improve living conditions among displaced persons by providing:
 - I. Adequate housing;
 - II. Security of tenure.

31. PS6: Biodiversity conservation and sustainable management of living natural resources

- (a) Protection and conservation of biodiversity;
- (b) Maintenance of benefits from ecosystem services;
- (c) Promotion of sustainable management of living natural resources;
- (d) Integration of conservation needs and development priorities

32. PS7: Indigenous peoples

- (a) Ensure full respect for indigenous peoples
 - I. Human rights, dignity, aspirations;
 - II. Livelihoods;
 - III. Culture, knowledge, practices;
- (b) Avoid/minimize adverse impacts;
- (c) Sustainable and culturally appropriate development benefits and opportunities;
- (d) Free, prior and informed consent in certain circumstances.

33. PS8: Cultural heritage

- (a) Protection and preservation of cultural heritage;
- (b) Promotion of equitable sharing of cultural heritage benefits.

34. The International Finance Corporation (IFC) PS can be viewed at:

["http://www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC_Performance_Standards.pdf?MOD=AJPERES"](http://www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC_Performance_Standards.pdf?MOD=AJPERES)

35. Performance Standard Guidance Notes: A set of eight Guidance Notes, corresponding to each PS, offers guidance on the requirements contained in the PS. In addition, the World Bank Group Environmental, Health and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of good international practice and are linked to the PS through PS2 and PS3.

36. The Guidance Notes and EHS Guidelines can be found at:

http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Sustainability/Sustainability+Framework/Sustainability+Framework+-+2012/Performance+Standards+and+Guidance+Notes+2012/

37. It may be noted that there is currently a Call for Inputs by the GCF as regards the Environmental and Social Management System (ESMS), closing on 31 January 2016. The document in this respect may be accessed at:

http://www.greenclimate.fund/documents/20182/24913/DCP_2015-11-30_-_Call_for_Public_Input_Environmental_and_Social_Management_System.pdf/fe88e70f-04cd-4fca-86ba-7843d31892d5?version=1.0

Overarching Policy of the ESMP

38. The overarching policies guiding the ESMP shall be those of the United Nations Development Programme, the Green Climate Fund and the applicable national environmental policy.

Objectives of the Environmental and Social Management Plan

39. An ESMP is a management tool used to assist in minimising the impact to the environment and reach a set of environmental objectives. To ensure the environmental objectives of the projects are met, this ESMP will be used by the contractor to structure and control the environmental management safeguards that are required to avoid or mitigate adverse effects on the environment.
40. The environmental and social objectives of the projects are to:
- provide clean energy and low emission transport to the people of the Republic of Mauritius to reduce the emissions of greenhouse gases
 - encourage the development of renewable energy through planning, commitment and continuous improvement
 - comply with all applicable laws, regulations and standards for the protection of the environment; and
 - adopt the best practicable means available to prevent or minimise environmental impact.
 - describe all monitoring procedures required to identify impacts on the environment; and
 - provide an overview of the obligations of Project staff and contractors in regard to environmental obligations.
41. The ESMP will be updated from time to time by the contractor in consultation with the Project staff and MOE to incorporate changes in the detailed design phase of the projects.

General Management Structure and Responsibilities

42. UNDP are accountable for the provision of specialist advice on environmental issues to the contractor and for environmental monitoring and reporting. The Ministry of Environment, Sustainable Development, Disaster and Beach Management (MOE), with the assistance of the Project Management team, will assess the environmental performance of the contractor in charge of construction throughout the project and ensure compliance with the ESMP.
43. UNDP through the Project Management team, will be responsible for monitoring the implementation of the ESMP by relevant supervisory staff during construction. During operations, the contractor will be accountable for implementation of the ESMP. Contractors working on the projects have accountability for preventing or minimising environmental and social impacts.

Overview - Institutional Requirements for the Environmental and Social Management Plan

44. As the Solar PV projects will be partially funded by the Green Climate Fund through UNDP, all works (including but not limited to civil and construction contractors) must adhere to the outcomes of the ESIA and this or a modified ESMP, including complying with the appropriate avoidance and mitigation measures. The ESIA and this or a modified ESMP will be assessed for each project by the MOE and UNDP prior to any works being undertaken. The ESMP identifies potential risks to the environment and social matters from the projects and outlines strategies for managing those risks and minimising undesirable environmental and social impacts.
45. MOE will be responsible for the monitoring of the ESMP. UNDP will gain the endorsement of the MOE and will ensure the ESMP is adequate and followed. The supervising engineer will ensure timely remedial actions are taken by the contractor where necessary.

Site Supervisor

46. The site supervisor, where applicable, is responsible for ensuring compliance with the ESMP. The site supervisor will provide advice on effective environmental management of the project to UNDP Staff, MOE and engineers and all construction site personnel. The site supervisor is to also ensure the environmental awareness of project personnel is maintained through appropriate training. A compliance report on mitigation measures will be submitted by UNDP to MOE for the civil contractor. An independent review of the compliance may be undertaken during construction and post-construction where deemed necessary.

Environmental Procedures and Site and Activity-Specific Work Plans/Instructions

47. Environmental procedures provide a written method describing how the management objectives for a particular environmental element are to be obtained. They contain the necessary detail to be site- or activity-specific and are required to be followed for all construction works. Site and activity-specific work plans and instructions are to be issued through the following methods:

Environmental and Incident Reporting

48. Any incidents, including non-conformance with the procedures of the ESMP, are to be recorded using an Incident Record and the details entered into a register. For any incident that causes or has the potential to cause material or serious environmental harm, the site supervisor shall notify MOE as soon as possible. The contractor must cease work until remediation has been completed as per the approval of MOE.

Daily and Weekly Environmental Inspection Checklists

49. A daily environmental checklist is to be completed at each work site by the relevant site supervisor and maintained within a register. The completed checklist is forwarded to MOE for review and follow-up if any issues are identified. A weekly environmental checklist is to be completed and will include reference to any issues identified in the daily checklists completed by the Site Supervisors.

Corrective Actions

50. Any non-conformances with the ESMP are to be noted in weekly environmental inspections and logged into the register. Depending on the severity of the non-conformance, the site supervisor may specify a corrective action on the weekly site inspection report. The progress of all corrective actions will be tracked using the register. Any non-conformances and the issue of corrective actions are to be advised to MOE.

Complaints Register

51. A complaints register will be established to record any concerns raised by the community during construction. Any complaint will be advised to UNDP and MOE within 24 hours of receiving the complaint. The complaint will be investigated and following the investigation, if it relates to a significant incident, the matter will be referred to UNDP for commentary and/or advice.

Review and Auditing

52. The ESMP and its procedures are to be reviewed at least every two months by UNDP staff and MOE. The objective of the review is to update the document to reflect knowledge gained during the course of construction operations and to reflect new knowledge and changed community standards (values). Any changes are to be developed and implemented in consultation with UNDP Staff and MOE. When an update is made, all site personnel are to be made aware of the revision immediately through a tool box meeting.

Public Consultation and Environmental and Social Disclosure

53. The project is designed to improve access to low-emission energy for over 441,000 people in the Republic of Mauritius. The GCF project has been developed through close consultations with the GCF Secretariat. The proposal is now accompanied by over 90 annexes and is in line with the request emanating from the National Designated Authority on behalf of the participating Ministries. The Draft ESIA and ESMP have been disclosed on the UNDP website since 21 October 2016 and are updated based on comments received from the GCF on an ongoing basis.

54. The Ministry of Finance and Economic Development (MOFED), Ministry of Energy & Public Utilities (MEPU), the Central Electricity Board (CEB) and the Ministry of Ocean Economy (MOE) have all been thoroughly involved in the

design of the relevant components of the GCF project. The project has been developed through a joint effort of the following stakeholders:

- Ministry of Finance and Economic Development
- Ministry of Energy and Public Utilities
- Central Electricity Board
- Ministry of Environment, Sustainable Development, Disaster and Beach Management
- Agence Francaise de Développement (AFD)
- United Nations Development Programme (Country Office and Corporate)

55. Within the Ministry of Finance and Economic Development, which is also the National Designated Authority (NDA), the Sector Management teams for Energy as well as the Development Cooperation section provided inputs into the funding proposal.
56. Within the Ministry of Energy and Public Utilities, the project was approved by the Technical Department and the Senior Chief Executive.
57. The Ministry of Environment, Sustainable Development, Disaster and Beach Management, which is also the UNFCCC Focal Point, was consulted in detail. The UNFCCC Focal Point for Mauritius has provided a letter of support to the GCF project – see Annex Ib to the Funding Proposal.
58. As a co-financing partner, Agence Francaise de Développement (AfD) was formally consulted on 11 June 2015 and at frequent intervals thereafter. UNDP and AFD have a cooperation MoU in place (Annex XIIIh of the Funding Proposal).
59. A stakeholder consultation meeting, open to all interested parties, was held to discuss the GCF project and finalise its design elements. A Project Appraisal Committee (PAC) meeting was held on 16 July 2015 with 18 institutions spanning Government, the private sector, NGOs, academia and regional organisations (see Annex VIIa to the Funding Proposal).
60. The Letter of No Objection was signed by the NDA on 30 July 2015 and reissued on 20 October 2016 (Annex Ia to the Funding Proposal).
61. The Government and UNDP have also invested considerable time and effort in ensuring consultations during preparation of responses to the GCF Secretariat review process. The UNDP global mitigation GCF coordinator effected visits to Mauritius in August 2015 and February 2016, and held consultations with key stakeholders, including: the National Designated Authority, the Ministry of Energy and Public Utilities, CEB, AFD and the INDC consultants working for the Ministry of Environment, Sustainable Development, Disaster and Beach Management. Specialist consultants have been hired to work on technical aspects of the proposal: the financial and economic analysis; the social and environmental risk identification and management plan; engineering and technical due diligence; and the gender assessment.
62. A publicised telephone number will be maintained by the Project Management team throughout the project to serve as a point of contact for enquiries, concerns and complaints. All enquiries, concerns and complaints will be recorded on a register and the appropriate manager will be informed.
63. Where there is a community issue raised, the following information will be recorded:
 - a) time, date and nature of enquiry, complaint or concern;
 - b) type of communication (eg telephone, letter, personal contact);
 - c) name, contact address and contact number;
 - d) response and investigation undertaken as a result of the enquiry, complaint or concern; and
 - e) actions taken and name of the person taking action.
64. Some enquiries, complaints and concerns may require an extended period to address. The complainant(s) will be kept informed of progress towards rectifying the concern. All enquiries, complaints and concerns will be investigated and a response given to the complainant in a timely manner.

65. Contractors will be required to nominate a staff will be responsible for undertaking a review of all enquiries, complaints and concerns and ensuring progress toward resolution of each matter.

Training of Contractors

66. The main contractor has the responsibility for ensuring systems are in place so that relevant employees, contractors and sub-contractors are aware of the environmental and social requirements for construction, including the ESMP.
67. All construction personnel will attend an induction which covers health, safety, environment and cultural requirements.
68. All staff and contractors engaged in any activity with the potential to cause serious environmental harm (e.g. handling of hazardous materials) will receive task specific environmental training.

Administration

69. The Project Management team will be responsible for the revision or updates of this document during the course of work. It is the responsibility of the person to whom the document is issued to ensure it is updated.
70. The site supervisor will be responsible for daily environmental inspections of the construction site. The MOE will cross check these inspections by undertaking monthly audits.
71. The contractor will maintain and keep all administrative and environmental records which would include a log of complaints together with records of any measures taken to mitigate the cause of the complaints.
72. The contractor will be responsible for the day to day compliance of the ESMP.
73. MOE will be the implementing agency and will be responsible for the implementation and compliance with the ESMP via the contractor. The ESMP will be part of any tender documentation.
74. The Supervising Engineer/Project Manager will supervise the contractor, while MOE will be responsible for environment and social issues.

Key Risks Identified at Programme Preparation Stage

75. The Project has been screened according to UNDP's Social and Environmental Procedure and the following potential risks have been identified. The small-scale rooftop PV systems addressed by the project are exempted from the EIA requirements of Mauritius under the Environmental Protection Act (EPA, 2002 - amended 2008) – see Annex VIb of the Funding Proposal.
76. The risks identified in the ESIA analysis are as follows:
- Delay in procurement of necessary technical assistance for the various components: Moderate
 - Duty-bearers may not have the capacity to meet their obligations to the project: Moderate
 - Potential for the project to reproduce discrimination against women's participation: Low
 - Vulnerability to climate change: Moderate
 - Vulnerability to geological hazards such as earthquakes: Low
 - Transport, installation and decommissioning of the PV systems on rooftops may pose potential safety risks to local communities and workers: Low
 - Potential failure of structural elements of rooftop PV systems can pose risks to communities: Low
 - Generation of waste: Moderate
77. Based on the above, the maximum risk category is Moderate and, therefore, the risk category for the overall project is **Moderate**. Table 2 below presents the risks identified and the recommended mitigation measures for the smooth operation of the project.

Key Impacts and Mitigation Measures

Table 2 Risks and Mitigation Measures

Selected Risk Factor 1			
Description	Risk category	Level of risk	Probability of risk occurring
Delay in procurement of necessary technical assistance for the various components.	Technical and operational	Low (<5% of project value)	Medium
Mitigation Measure(s)			
The UNDP Country Office will put its procurement processes at the disposal of the Government of Mauritius. Under the National Implementation Modality, UNDP may undertake procurement for Government based on a Letter of Agreement and UNDP's Cost Recovery Policy. In general, UNDP procurement timelines are shorter than Government procurement schedules.			
Selected Risk Factor 2			
Description	Risk category	Level of risk	Probability of risk occurring
Duty-bearers may not have the capacity to meet their obligations to the project.	Social and environmental	Low (<5% of project value)	Medium
Mitigation Measure(s)			
Project elements will include: (i) the establishment of the Mauritius Renewable Energy Agency, which will be responsible for promoting and facilitating the expansion of the RE sector; (ii) development of additional relevant legislation, and (iii) training to Government and the private sector (notably SMEs) on solar PV. These elements are expected to increase stakeholders' capacities. Capacity building will take place for the Mauritius Renewable Energy Agency, thereby empowering it to meet its responsibilities fully.			
Selected Risk Factor 3			
Description	Risk category	Level of risk	Probability of risk occurring
Potential for the project to reproduce discrimination against women's participation.	Social and environmental	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
<ul style="list-style-type: none"> Gender-disaggregated data will be used for monitoring outputs, outcomes and impacts during project implementation to ensure women's participation in capacity building and employment opportunities. Capacity-building elements incorporated in the project design that will have female participation are: (i) Component 1 will ensure gender balance (as appropriate) in the recruitment of Mauritius Renewable Energy Agency staff as well as in the dedicated training on project development; (ii) Component 2 will offer training to the private sector (with a particular focus on SMEs) in the installation, operations and maintenance of PV systems; (iii) Component 3 will offer gender-sensitive training on the use of renewable energy to OIDC staff and selected inhabitants of Agalega; 			
Selected Risk Factor 4			
Description	Risk category	Level of risk	Probability of risk occurring
Vulnerability to climate change.	Social and environmental	Medium (5.1-20% of project)	Medium

		value)	
Mitigation Measure(s)			
<ul style="list-style-type: none"> • Site selection will include locations with good insolation characteristics and where there are minimal hindrances to PV functioning. • The project will consider PV modules with a higher temperature coefficient if most sites available are expected to have high temperature increases or experience significant heat waves. • Specifically for Agalega, the project will consider taking out catastrophic or performance guarantee insurance to protect against degradation. • Also specifically for Agalega, a maintenance plan will be devised for OIIC and its implementation monitored until the end of the project through bi-annual site visits by the Project Coordinator and the Component 3 Project Manager. 			
Selected Risk Factor 5			
Description	Risk category	Level of risk	Probability of risk occurring
Vulnerability to geological hazards such as earthquakes.	Social and environmental	Low (<5% of project value)	Low
Mitigation Measure(s)			
<ul style="list-style-type: none"> • Structural integrity will be a major criterion in determining the suitability of a building for a rooftop solar PV system to ensure it can support the weight of the system (including 'dead load'). • Design of rooftop PV systems will incorporate applicable national structural engineering, construction and technical standards and/or international standards such as those from IEC, IEEE, ASTM, UL, etc. • For the medium-scale PV systems, EIAs will be prepared as required by EPA 2002 (amended 2008). 			
Selected Risk Factor 6			
Description	Risk category	Level of risk	Probability of risk occurring
Transport, installation and decommissioning of the PV systems on rooftops may pose potential safety risks to local communities and workers.	Technical and operational	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
<ul style="list-style-type: none"> • A safety management plan will be required from the developer / EPC contractor(s) and sub-contractor(s), and will be implemented and monitored for compliance during construction and decommissioning. • Workers will have orientation and regular training on safe working at height. • Personal protective equipment will be provided to workers. • Clear warning / danger signs will be installed to alert local communities of PV installation / decommissioning work. 			
Selected Risk Factor 7			
Description	Risk category	Level of risk	Probability of risk occurring
Potential failure of structural elements of rooftop PV systems can pose risks to communities.	Technical and operational	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
<ul style="list-style-type: none"> • Rooftop site selection criteria will include the presence of trees adjacent to the building. • The developer / EPC contractor / sub-contractor will be required to ensure that only certified electrical contractors 			

<p>with experience in PV systems are allowed to install the solar units.</p> <ul style="list-style-type: none"> • Prominent warning signs will be installed at designated locations so that persons, particularly those with disabilities, are able to recognise the potential danger. • A regular maintenance and cleaning project for the solar panels will be implemented to ensure no debris accumulates beneath the panels; trimming of nearby trees (if trees cannot be avoided) will ensure a safe distance from the panels; and inspection of wiring and cables. • A safety management plan will be required from the developer / EPC contractor(s) and sub-contractor(s) and will be implemented throughout the project cycle. 			
Selected Risk Factor 8			
Description	Risk category	Level of risk	Probability of risk occurring
Generation of waste.	Social and environmental	Low (<5% of project value)	Medium
Mitigation Measure(s)			
<ul style="list-style-type: none"> • Project EPC contractor(s) and sub-contractor(s) will be required to prepare and implement a waste management plan, which will include measures such as segregation at source, 3Rs, and for manufacturers to take back PV panels either at the end of their lifetimes or as they are replaced. Good housekeeping during construction will be strictly implemented. This provision will be included as one of the special conditions in the bid documents. • All recyclable wastes, including damaged solar panels and metal racks, will be sorted at source and properly collected for recycling while biodegradable wastes will be composted. Other solid wastes and non-compostable wastes will be collected and disposed of following the requirements of the Local Government Act 2011, and Local Government Regulations 2003 and 2004.⁵² • EIAs will be prepared for the medium-scale PV systems following the requirements of EPA 2002 (amended 2008). 			
Selected Risk Factor 9			
Description	Risk category	Level of risk	Probability of risk occurring
The need for continued political support for institutional strengthening (Component 1).	cial and environmental	Low (<5% of project value)	Low
Mitigation Measure(s)			
<ul style="list-style-type: none"> • The MARENA Bill was passed by Parliament on 29 September 2015. • In addition, the INDC clearly states that the Government of Mauritius will implement renewable energy projects subject to the availability of international technical assistance and funding. • The Minister of Energy and Public Utilities is on record in Parliament (Hansard, page 107: Annex XIIIap of the Funding Proposal) as stating the importance of the GCF project to the Central Electricity Board and CEB's strategic priorities. • The project will be executed nationally through UNDP's National Implementation Modality (NIM) and has the full support of the GCF NDA and the relevant line ministries. • There can, therefore, be little doubt about continued political support and, consequently, this risk is considered to be very low. 			
Selected Risk Factor 10			
Description	Risk category	Level of risk	Probability of risk occurring

⁵² <http://localgovernment.govmu.org/English/Legislations/Pages/Local-Government-Act.aspx>

<p>Failure of operators of PV systems to continue supporting and providing O&M to equipment (Components 2 and 3).</p>	<p>Technical and operational</p>	<p>Medium (5.1-20% of project value)</p>	<p>Low</p>
<p>Mitigation Measure(s)</p>			
<ul style="list-style-type: none"> • There are currently approximately 20 suppliers of PV systems in Mauritius. A list of 18 that were operating under SSDG phases 1,2 and 3 is annexed (Annex XIIIan of the Funding Proposal). The large number of PV private sector operators and the competitive environment in which they operate means that this risk is considered to be very low. • O&M and after-sales service have not proved to be problems during SSDG phases 1,2 and 3, and the growth in suppliers and technical expertise during phases 1, 2 and 3 is expected to reduce this risk even further in phase 4. 			

ADDITIONAL ENVIRONMENTAL MANAGEMENT MEASURES DURING PROJECT IMPLEMENTATION

78. In this section, additional environmental measures to be implemented during the project are described. They concern the management of Noise and Vibration, Air Quality, Flora and Fauna management, Waste Management and Emergency Response

Noise and Vibration

79. All construction and operation activities have the potential to cause noise nuisance. Vibration disturbance to nearby residents and sensitive habitats is likely to be caused through the use of vibrating equipment. Blasting is not required to be undertaken as part of this project. Further, the intakes and diffusers can create underwater noise via pumps.
80. It is assumed that there are no sensitive receptors in proximity to the projects.
81. Contractors involved in construction activities should be familiar with methods of controlling noisy machines and alternative construction procedures as contained within specific Mauritius legislation or in its absence, international good practice may be used if the legislation has not been enacted.
82. The detail, typical equipment sound power levels, provides advice on project supervision and gives guidance noise reduction. Potential noise sources during construction may include:
- a. delivery vehicles;
 - b. power tools and compressors.

Performance Criteria

83. The following performance criteria are set for the construction of the projects:
- a. noise from construction and operational activities must not cause an environmental nuisance at any noise sensitive place;
 - b. undertake measures at all times to assist in minimising the noise associated with construction activities;
 - c. no damage to off-site property caused by vibration from construction and operation activities; and
 - d. corrective action to respond to complaints is to occur within 48 hours.

Monitoring

84. A standardised noise monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will:
- a. ensure equipment and machinery is regularly maintained and appropriately operated
 - b. carry out potentially noisy construction activities during daylight hours only; i.e. 7am -5pm.

Reporting

85. All noise monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MOE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to noise is exceeded.

Table 1: Noise and Vibration Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
N1: Increased noise levels	N1.1: Select plant and equipment and specific design work practices to ensure that noise emissions are minimised during construction and operation including all pumping equipment.	All phases	Contractor	Maintain records
	N1.2: Specific noise reduction devices such as silencers, mufflers and/or acoustic rock breaking heads shall be installed as appropriate to site plant and equipment.	Pre and during construction	Contractor	Maintain records
	N1.3 Minimise the need for and limit the emissions as far as practicable if noise generating construction works are to be carried out outside of the hours: 7am-5pm (Mon - Fri).	Construction phase	All Personnel	Daily and maintain records
	N1.4: Consultation with nearby residents in advance of construction activities particularly if noise generating construction activities are to be carried out outside of the hours: 7am-5pm (Mon - Fri) and 7am-3pm (Sat).	Construction phase	All Personnel	Daily and maintain records
	N1.5 The use of substitution control strategies shall be implemented, whereby excessive noise generating equipment items onsite are replaced with other alternatives.	Construction phase	All Personnel	Daily and maintain records
	N1.6 Provide temporary construction noise barriers in the form of solid hoardings where there may be an impact on specific residents.	Construction phase	Site Supervisor	Daily and maintain records
	N1.7 All incidents complaints and non-compliances related to noise shall be reported in accordance with the site incident reporting procedures and summarised in the register.	Construction phase	Site Supervisor	Maintain records
	N1.8 The contractor should conduct employee and operator training to improve awareness of the need to minimise excessive noise in work practices through implementation of measures.	Pre and during construction	Contractor	Maintain records
N2. Vibration due to construction	N2.1: Identify properties, structures and habitat locations that will be sensitive to vibration impacts resulting from construction and operation of the projects.	Pre and during construction	Contractor	Maintain records
	N2.2: Design to give due regard to temporary and permanent mitigation measures for noise and vibration from construction and operational vibration impacts.	Pre-construction	Contractor	Maintain records
	N2.3: All incidents, complaints and con-compliances related to vibration shall be reported in accordance with the site incident reporting procedures and summarised in the register	Construction phase	Site Supervisor	Maintain records
	N2.4: During construction, standard measure shall be taken to locate and protect underground services from construction and operational vibration impacts	Construction phase	Site Supervisor	Maintain records

Air Quality

86. All construction activities have the potential to cause air quality nuisance although this will be minimal in the case of this project
87. Vibration disturbance to nearby residents is likely to be caused through construction traffic and installation of PV panels.
88. It is assumed that there are no sensitive receptors in proximity to the projects.
89. Contractors involved in construction and operation activities should be familiar with methods minimising the impacts of deleterious air quality and alternative construction procedures as contained in the Mauritian legislation.

Performance Criteria

90. The following performance criteria are set for the construction of the projects:
 - a. release of dust/particle matter must not cause an environmental nuisance;
 - b. undertake measures at all times to assist in minimising the air quality impacts associated with construction and operation activities; and
 - c. corrective action to respond to complaints is to occur within 48 hours.

Monitoring

91. A standardised air monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue.

Reporting

92. All air quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MOE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to air quality is exceeded.

Table 2: Air Quality Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
A1: Increase in dust levels at sensitive locations	A1.1: Implement effective dust management measures in all areas during design, construction and operation.	Pre and during construction	All Personnel	Daily and maintain records
	A1.2: Install dust gauges at locations identified for construction lay down and stockpiling within the project footprints.	During construction	Site Supervisor	Daily and Weekly Reports
	A1.3: Manage dust/particulate matter generating activities to ensure that emissions do not cause an environmental nuisance at any sensitive locations	During construction	Site Supervisor	Daily and maintain records
	A1.4: Construction activities should minimising risks associated with climatic events.	During construction	Site Supervisor	Daily and maintain records
	A1.5: Implement scheduling/staging of proposed works to ensure major vegetation disturbance and earthworks are minimised.	Entire construction	Contractor	Daily and maintain records
	A1.6: Ensure that materials to be stockpiled onsite are not ordered and/or purchased until they are required for works.	Entire construction	Contractor	Daily and maintain records
	A1.7: Locate material stockpile areas as far as practicable from sensitive receptors.	During construction	Site Supervisor	Daily and maintain records
	A1.8: Source sufficient water of a suitable quality for dust suppression activities complying with any water restrictions.	During construction	Site Supervisor	Daily and maintain records
	A1.9: Schedule revegetation activities to ensure optimum survival of vegetation species.	During construction	Site Supervisor	Maintain records
	A1.10: Ensure an air quality management plan is developed and implemented.	Pre and during construction	Contractor	Maintain records
	A1.11: Rubbish skips and receptacles should be covered and located as far as practicable from sensitive locations.	During construction	Site Supervisor	Maintain records
	A1.12: Restrict speeds on haul roads and access tracks.	During construction	Site Supervisor	Daily and maintain records
A1: Increase in dust levels at sensitive locations	A1.13: Cover loads of haul trucks and equipment and plant when not in use and in transit.	During construction	Site Supervisor	Daily and maintain records
A2: Increase in vehicle emissions (including odours and fumes)	A2.1 Ensure construction vehicles are switched off when not in use.	During construction	Site Supervisor	Daily and maintain records
	A2.2 Ensure only vehicles required to undertake works are operated onsite.	During construction	Site Supervisor	Daily and maintain records

	A2.3 Ensure all construction vehicles, plant and machinery are maintained and operated in accordance with design standards and specifications.	During construction	Site Supervisor	Daily and maintain records
	A2.4 Develop and implement an induction program for all site personnel, which includes as a minimum an outline of the minimum requirements for environmental management relating to the site.	Pre and during construction	Contractor	Daily and maintain records
	A2.5 Locate construction car park and vehicle/plant/equipment storage areas as far as practicable from sensitive locations.	During construction	Site Supervisor	Daily and maintain records
	A2.6 Direct exhaust emissions of mobile plant away from the ground.	During construction	Site Supervisor	Daily and maintain records
	A2.7 Rubbish skips and receptacles should be covered and located as far as practicable from sensitive locations.	During construction	Site Supervisor	Daily and maintain records

Flora and Fauna

93. It is assumed that the majority of the project areas have been previously disturbed although vegetation may still exist. Contractors involved in construction activities should be familiar with methods minimising the impacts of clearing vegetation to minimise the footprints of all projects to that essential for the works and rehabilitate disturbed areas.

Performance Criteria

94. The following performance criteria are set for the construction of the projects:
- a. no clearance of vegetation outside of the designated clearing boundaries;
 - b. no death to native fauna as a result of clearing activities;
 - c. no introduction of *new* weed species as a result of construction activities;
 - d. no increase in *existing* weed proliferation within or outside of the corridor as a result of construction activities; and
 - e. successful establishment of rehabilitation works incorporating species native to the local area.

Monitoring

95. A flora and fauna monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will when undertaking clearing works, will compile a weekly report to MOE and UNDP staff outlining:
- a. any non-conformances to this ESMP;
 - b. the areas that have been rehabilitated during the preceding week; and
 - c. details of the corrective action undertaken.

Reporting

96. All flora and fauna monitoring results and/or incidents will be tabulated and reported as outlined in the ESMP. The MOE must be notified immediately in the event of any suspected instances of death to fauna and where vegetation is detrimentally impacted.

Table 3: Flora and Fauna Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
FF1. Habitat loss and disturbance of fauna	FF1.1 Limit vegetation clearing and minimise habitat disturbance through adequate protection and management of retained vegetation.	During construction	Site Supervisor	Daily and maintain records
	FF1.2: Minimise noise levels and lighting intrusion throughout construction and operation in the vicinity of any sensitive locations.	During construction	Site Supervisor	Daily and maintain records
	FF1.3: Ensure that all site personnel are made aware of sensitive fauna/habitat areas and the requirements for the protection of these areas.	During construction	Contractor	Daily and maintain records
	FF1.4 Minimise disturbance to onsite fauna and recover and rescue any injured or orphaned fauna during construction and operation.	During construction	Contractor	Daily and maintain records, report to MOE
FF2. Introduced flora and weed species	FF2.1: Implement an EDSCP to reduce the spread of weeds through erosion and sediment entering any waterways and therefore spreading.	Pre and during construction	Contractor	Maintain records
	FF2.2: Revegetate disturbed areas using native and locally endemic species that have high habitat value.	During construction	Site Supervisor	As required and maintain records
	FF2.3: Minimise disturbance to mature remnant vegetation, particularly canopy trees.	During construction	Site Supervisor	Daily and maintain records
	FF2.4: The removal of regrowth native trees should be minimised particularly where the width of a forest is narrow.	During construction	Site Supervisor	Daily and maintain records
	FF2.5: Small trees and shrubs shall be removed in preference to large trees.	During construction	Site Supervisor	Daily and maintain records
	FF2.6: Vegetation to be removed shall be clearly marked using paint or flagging tape.	During construction	Site Supervisor	Daily and maintain records
FF2. Introduced flora and weed species	FF2.7: Environmental weeds and noxious weeds within the project footprints shall be controlled.	During and post construction	Site Supervisor	Weekly and maintain records

Waste Management

97. The MOE advocate good waste management practice. The preferred waste management hierarchy and principles for achieving good waste management is as follows:
- a. waste avoidance (avoid using unnecessary material on the projects);
 - b. waste re-use (re-use material and reduce disposing);
 - c. waste recycling (recycle material such as cans, bottles, etc.; and
 - d. waste disposal (all putrescible to be dumped at approved landfills).
98. The key waste streams generated during construction are likely to include demolition wastes, this being the removal of any existing structures located in the project footprints and associated works that will have to be demolished. This will include, but not limited to, shrubs/trees, pavements, power poles etc. The wastes to be generated will mostly be vegetation-based and also include:
- a. the excavation wastes unsuitable for reuse during earthworks;
 - b. wastes from construction equipment maintenance. Various heavy vehicles and construction equipment will be utilised for the duration of the construction phase.
 - c. non-hazardous liquid wastes will be generated through the use of workers' facilities such as toilets; and
 - d. general wastes including scrap materials and biodegradable wastes
99. Contractors involved in construction and operational activities should be familiar with methods minimising the impacts of clearing vegetation to minimise the footprint to that essential for the works and rehabilitate disturbed areas. By doing these activities, the projects should minimise the impact of waste generated by the project.

Performance Criteria

100. The following performance criteria are set for the construction of the projects:
- a. waste generation is minimised through the implementation of the waste hierarchy (avoidance, reduce, reuse, recycle);
 - b. no litter will be observed within the project corridor or surrounds as a result of activities by site personnel;
 - c. no complaints received regarding waste generation and management;
 - d. any waste from on-site portable sanitary facilities will be sent off site for disposal by a waste licensed contractor; and
 - e. waste oils obtained from the oil separator will be collected and disposed or recycled off-site, local oil companies or shipped for recycling.

Monitoring

101. A waste management monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue.

Reporting

102. The MOE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to waste is exceeded.

Table 4: Waste Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
WT1: Production of wastes and excessive use of resources	WT1.1: Preference shall be given to materials that can be used to construct the project that would reduce the direct and indirect waste generated.	Pre and during construction	Contractor	Maintain records
	WT1.2: Daily waste practices shall be carried out unless these are delegated to the activities of external waste management bodies.	During construction	Site Supervisor	Daily and maintain records
	WT1.3: The use of construction materials shall be optimised and where possible a recycling policy adopted.	During construction	Site Supervisor	Weekly and maintain records
	WT1.4: Separate waste streams shall be maintained at all times i.e. general domestic waste, construction waste and contaminated waste. Specific areas on site shall be designated for the temporary management of the various waste streams. Adequate signage and colour coded bins will be used for each waste streams.	During construction	Site Supervisor	Weekly and maintain records
	WT1.6: Any contaminated waste shall be disposed of at an approved landfill.	During construction	Site Supervisor	Weekly and maintain records
	WT1.7: Recyclable waste (including oil and some construction waste) shall be collected separately and disposed of correctly.	During construction	Site Supervisor	Weekly and maintain records
	WT1.8: Waste sites shall be sufficiently covered daily to ensure that wildlife does not have access.	During construction	Site Supervisor	Daily
	WT1.9: Disposal of waste including all filters shall be carried out in accordance with the Government of Mauritius requirements.	During construction	Site Supervisor	Weekly and maintain records
	WT1.10: Fuel and lubricant leakages from vehicles and plant shall be immediately rectified.	During construction	Site Supervisor	Daily and maintain records
	WT1.11: Where possible, concrete batching plants shall be centrally located to minimise the occurrence of concrete batching at individual construction locations.	Pre and during construction	Contractor	Maintain records
	WT1: Production of wastes and excessive use of resources	WT1.12: Major maintenance and repairs shall be carried out off-site whenever practicable.	During construction	Site Supervisor
WT1.13: Remnants of concrete shall not be left at any location along the corridor.		During Construction	Site Supervisor	Weekly and maintain records
WT1.14: Disposal of trees shall be undertaken in accordance with one or more of the following methods: a. Left in place; b. Chipped and mulched; and c. Large trunk sections may be sold/passed on to a commercial mill.		During Construction	Site Supervisor	Weekly and maintain records
WT1.15: Hydrocarbon wastes shall be stored in colour coded and labelled drums placed around fuelling depots.		During Construction	Site Supervisor	Daily and maintain records

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
	WT1.16: Where possible, fuel and chemical storage and handling shall be undertaken at central fuel and chemical storage facilities, such as petrol stations.	During Construction	Site Supervisor	Daily and maintain records
	WT1.17: On-site storage of fuel and chemicals shall be kept to a minimum.	During Construction	Contractor	Daily, maintain records and report any incidents
	WT1.18: Any waste oils and lubricants are to be collected and transported to recyclers or designated disposal sites as soon as possible.	During Construction	Site Supervisor	Daily and maintain records
	WT1.19: Any dangerous goods stored on site shall be stored in accordance with Mauritian regulations.	During Construction	Contractor	Daily and maintain records

Emergency Response Plan

103. In the event of actions occurring, which may result in serious health, safety and environmental (catastrophic) damage, emergency response or contingency actions will be implemented as soon as possible to limit the extent of environmental damage.
104. The contractor will need to incorporate construction emergency responses into the road projects complying with the requirements under the Occupational, Health and Safety Policy of the contractor or the work related Government of Mauritius legislation.

Performance Criteria

105. The following performance criteria are set for the construction of the evacuation road projects:
 - a. no incident of fire outbreak during construction;
 - b. reduce the risk of fire by undertaking hot works within cleared locations;
 - c. provide an immediate and effective response to incidents that represent a risk to public health, safety or the environment; and
 - d. minimise environmental harm due to unforeseen incidents.

Monitoring

106. An emergency response monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, visual inspections will be conducted by site supervisor daily with reporting to MOE and UNDP staff on a weekly basis (minimum) noting any non-conformances to this ESMP.

Reporting

107. The MOE and UNDP staff must be notified immediately in the event of any emergency, including fire or health related matter including those that have resulted in serious environmental harm.

Table 5: Emergency Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
E1. Fire and Emergency management and prevention strategies implemented	E1.1: Flammable and combustible liquids bunding/storage areas to be designed in accordance with appropriate international standards	Pre and during construction	Contractor	Daily and maintain records
	E1.2: Fire extinguishers are to be available within all site vehicle	During construction	Contractor	Daily and maintain records
	E1.3: No open fires are permitted within the project area	During construction	Site Supervisor	Daily and maintain records
	E1.4: No cigarette butts are to be disposed of onto the ground throughout the project area, all smokers must carry a portable disposal bin to reduce the risk of a spot fire starting and general litter	During construction	All Personnel	Daily and maintain records
	E1.5: Any stockpiles of mulch are not to exceed two metres in height and width and must be turned regularly.	During construction	All Personnel	Daily and maintain records
	E1.6: Train all staff in emergency preparedness and response (cover health and safety at the work site)	During construction	Site Supervisor	Daily and maintain records
	E1.7: Check and replenish First Aid Kits	During construction	Site Supervisor	Daily and maintain records
	E1.8: Use of Personal Protection Equipment	During construction	All Personnel	Daily and maintain records

Annex 7: Gender Assessment and Action Plan

1. Introduction

The proposed project supports the Government of Mauritius *to improve the access to low-emission sources of electricity and to improve the public transport system with new fuel-efficient hybrid buses.*

Mauritius has registered high economic growth of 3.5 percent in 2015 and 3.4 percent in 2014 (World Bank). Its economic development is dependent on the Euro zone, particularly for foreign direct investments (FDI) and trade. Various factors have contributed to Mauritius's economic growth and have led to the advancement of the country, known as one of the most competitive economies in Sub-Saharan Africa. Mauritius has been a top performer in global indices, based on:

- Mo Ibrahim Index of African Governance – 1st in 2015;
- World Bank's Ease of Doing Business - 28th out of 189 countries in 2015;
- Global Competitiveness Index (GCI) – 1st in Sub-Saharan Africa;
- UNDP Human Development Index - 63rd out of 188 countries in 2014.

Mauritius has achieved 82 percent of the Millennium Development Goals (MDG) targets for MDGs 1-7. Substantial progress has been made in reducing poverty levels, which is relatively low, in comparison to other countries in Africa. Successful implementation of poverty reduction strategies led to the expansion of employment opportunities across the country, and modernization of the economy.⁵³

Despite the significant progress that has been made, numerous challenges still remain. Increased demand for high-skill labour, income inequalities, and insufficient energy supply are one of the few challenges that Mauritius is encountering.

This proposed project seeks to support the Government of Mauritius to take mitigation issues such as increased energy demand and greenhouse gas emissions into account in the management of energy. This gender assessment provides an overview of the situation in Mauritius, identifying gender issues that are relevant to the project, and examining gender-mainstreaming opportunities.

The resulting gender assessment is based on:

- Undertaking a desktop review, and aligning approaches in this proposal with the national priorities of Mauritius;
- Incorporating information and lessons learnt from past studies and assessments on gender in Mauritius by the Government of Mauritius, the United Nations, Development Partners, civil society organizations, and multilateral development banks;
- Conducting stakeholder consultations and engaging women affected by the project and incorporating all points raised; and
- Integrating gender considerations in the project indicators, targets and activities, identifying women as leaders and decision-makers.

2. Renewable Energy and Transport Sector in Mauritius

⁵³ http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEB%20VOL%20Issue%203%20April%202011_AEB%20VOL%20Issue%203%20April%202011.pdf

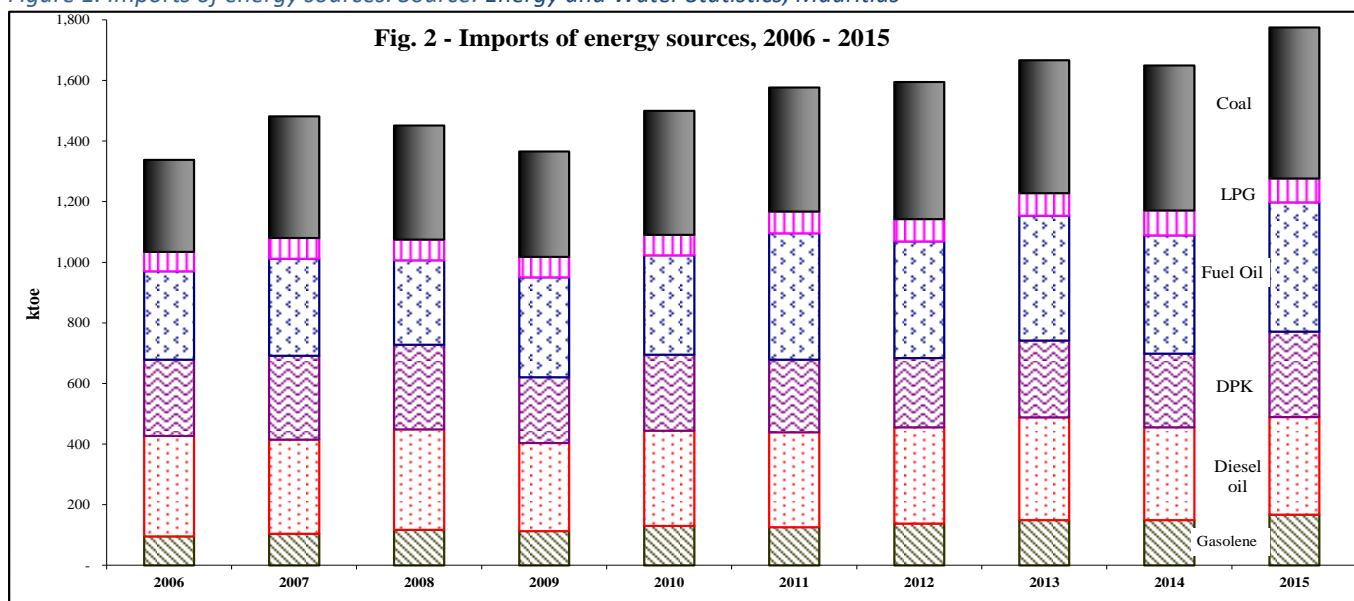
Mauritius is a Small Island Developing State extremely vulnerable to energy shocks. Mauritius is heavily dependent on imports for its energy supply and is importing up to 82 percent of fossil fuels. The grid emission factor of Mauritius is extremely high at 1.01 tonnes CO²/MWh due to the prevalence of imported coal and fuel oil in the electricity generation mix. Net greenhouse gas emissions are increasing at a rapid rate of 3 percent per year. The pressing need to significantly enhance Mauritius’s energy independence and reduce greenhouse gas emissions is recognised in the country’s Nationally Determined Contribution (2016), its Second National Communication to the UNFCCC (2010) and its UNFCCC Technology Needs Assessment (2014), as well as in a comprehensive suite of Government strategies and policies part of the Long-Term Energy Strategy (2011-2025). Table 1 portrays primary and secondary source of energy over the period of 2013-2014 and it clearly gives insights that 42 percent of energy in Mauritius, comes from coal. Both hydro and wind renewable energies also play a major role in the energy generation.⁵⁴

Table 1: Electricity generated by source of energy, 2013-2014. Source: Energy and Water Statistics, Mauritius

Source of energy	2013		2014	
	GWh	%	GWh	%
Primary energy	121.2	4.2	140.00	4.8
Hydro (renewable energy)	94.8	3.3	90.80	3.1
Wind (renewable energy)	3.6	0.1	3.20	0.1
Landfill gas (renewable energy)	20.00	0.7	21.30	0.7
Photovoltaic (renewable energy)	2.7	0.1	24.60	0.8
Secondary energy	2,764.10	95.8	2,797.00	95.2
Gas turbine (kerosene)	1.7	0.1	2.00	0.1
Fuel oil & Diesel	1,076.10	37.3	1,079.30	36.7
Coal	1,213.60	42.1	1,259.50	42.9
Bagasse (renewable energy)	472.8	16.4	456.2	15.5
Total	2,885.80	100	2,936.90	100
of which: renewable energy	594	20.6	596.2	20.3

Figure 1 displays the imports by source of energy from 2006 to 2015, where two major trends become recognizable. First of all, the imports are gradually increasing over time, with 2015 being the period of highest dependence on energy imports. Secondly, coal and fuel oil appear as the most preferable source of imported energy.

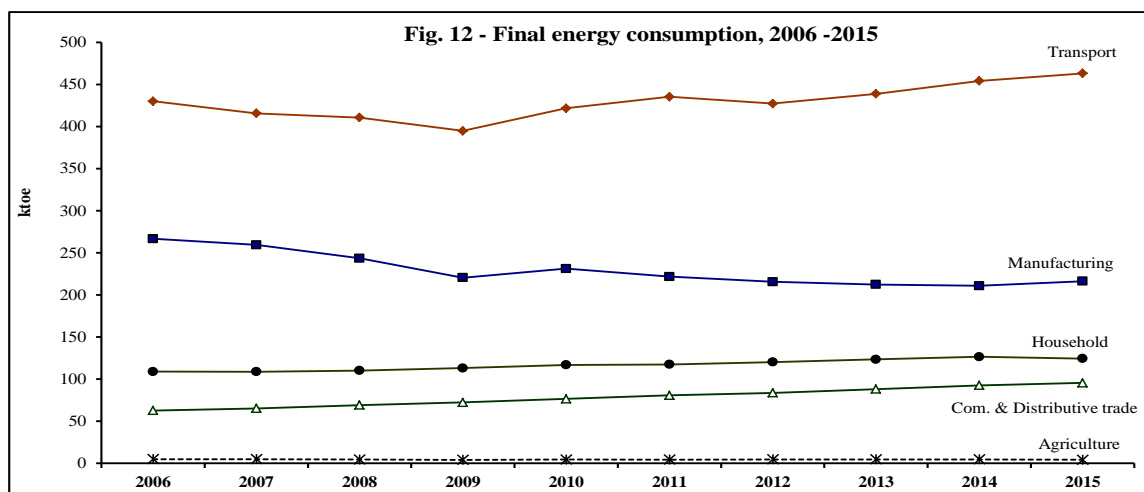
Figure 1. Imports of energy sources. Source: Energy and Water Statistics, Mauritius



Energy Sector

The demand for electricity in the energy sector has been increasing and as a result, emissions from the energy industries increased by 63.1 percent from 2000 to 2006. From Figure 2, it becomes apparent that energy consumption from the transport sector is the highest one, followed by the manufacturing sector. From 2012, final energy consumption has been increasing across all sectors of the economy.

Figure 2. Final Energy Consumption, 2006-2015. Source: Energy and Water Statistics, Mauritius



The Long-Term Energy Strategy for 2009-2025 aims to reduce fossil fuel use and the Government of Mauritius has announced the following two key targets:

- Target for renewable energy (RE) of at least 35% of electricity production by 2025.
- The establishment of a dedicated Renewable Energy Agency to coordinate the rapid intake of renewable energy.

The Government Action Plan (2015-2019) provides the framework in which national strategies, including the Outline Energy Policy, the Long-Term Energy Strategy 2009-2025 and CEB's Integrated Electricity Plan, will be realised.

GHG Emissions

GHG emissions in Mauritius have increased by 22.8 percent during the period of 2000 to 2006 and the main contributor to GHG emission is CO² or Sulfur Dioxide. The Government of Mauritius has undertaken measures to reduce the dependence on fossil fuels, which underlines in the country's national strategy. Mitigation measures have been adopted since 2010 and these include:

- Use of energy efficient machines
- Advancement of solar water heaters
- Wind turbines installations in Rodrigues
- Widening the use of landfill gas
- Use of energy saving street lights
- Introducing endemic gardens in colleges
- Plating of mangroves
- Widening the use of energy saving lamps in the communities
- Phasing out of HFCs and PFCs

- Amplified energy conversion efficiency of bagasse⁵⁵

The Second National Communication to the UNFCCC (2010) conveys that Mauritius's overall greenhouse gas (GHG) emissions are growing by 3% per year. Greenhouse gas emissions from the energy and transport sectors are growing by 5.4% and 3.3% per year, respectively. These sectors, altogether account for 86% of Mauritius's total greenhouse gas (GHG) emissions of 3.8 MtCO₂e.⁵⁶ As identified by the country's UNFCCC Technology Needs Assessment (2014), solar energy and energy efficiency offer significant advantages. Mauritius' major current source of renewable energy is bagasse. Bagass generated electricity accounts for 16% of the total electricity generation and 80% of renewable energy electricity generation. Due to land constraints and its seasonal availability, bagass is basically unscalable.

Electricity production in Agalega

The republic of Mauritius comprises of several islands, in addition to Mauritius, these include the islands of Cargados Carajos, Rodrigues and the Agalega Islands. The islands are vulnerable to extreme weather, tropical cyclone and sea-level-rise. Variations in climate are occurring, such as rise in temperatures, particularly in the Agalega islands, by 0.62°C per decade.

The Agalega Island does not have a central electricity grid and uses diesel-powered mini-grids. It is also entirely depended on imported fossil fuels, which contributes to its high generation of green gas emissions. The island uses oil drums, which raises severe environmental concerns. A solution to the island's problem of insufficient energy supply is a decentralized Solar PV technology, which could also decrease the island's dependence on diesel.

Transport sector

Out of the total energy consumption, 51 percent goes to the transport sector. Fuel consumption for land transport has increased by 2.9 percent, from 310.1 ktoe⁵⁷ in 2013 to 319.1 ktoe in 2014. Moreover, fuel consumption for aviation has increased by 5.1 percent, from 120.7 ktoe in 2013 to 126.8 ktoe in 2013.⁵⁸

Primary form of public transportation in Mauritius is bus with more than 60 percent of the total population using buses on a daily basis, or at least once a week. Impediments to the development of the transport sector are numerous. Some of the issues are that buses fleet have been in use for more than 10 years, they are fuel-inefficient and release higher level of pollution, they are also not suitable for people with disabilities. As a response, the Ministry of Public Infrastructure and Land Transport and the National Transport Authority (NTA) launched the initiative to modernize and replace current buses with new ones, suitable for the environment and accessible to all. However, the programme hasn't been able to achieve its targets due to various issues. Further efforts need to be taken in modernizing public transportation and expanding its capacities.

3. Existing Gender Inequality in Mauritius

Gender inequality is one of the main indicators of inequality and is played out along political, social and cultural dimensions. It is closely linked to poverty and other development challenges which is deeply-rooted in social norms and economic conditions with a greater impact on the poor, particularly on women and young people.

Gender inequality issues in Mauritius can be summed up as:

1. Low representation of women in decision-making;

⁵⁵ <http://www.mediaterre.org/docactu,Q0VEUkVGSS9kb2NzL0FMVEVFU3RyYXQtZHJhZnQ=,7.pdf>

⁵⁶ Million metric tons of carbon dioxide equivalent

⁵⁷ Tonne of oil equivalent

⁵⁸ <http://statsmauritius.govmu.org/English/StatsbySubj/Documents/ei1179/water.pdf>

2. Lack of reliable gender statistics and research;
3. Inadequate funding;
4. Existence of socio-cultural norms and patriarchal traditions;
5. Sexual and gender-based violence;
6. Unequal work burden for women in household and community.

Political participation

Mauritius is a member of the Southern African Development Community (SADC) countries and, has not yet signed the SADC Protocol of Gender and Development. The Protocol appeals for equal representation of women in decision-making by 2015.⁵⁹ Further to Elections 2014, out of the total of 24 cabinet Ministers, there are now three women. The Speaker of the National Assembly is also a woman. These figures clearly show the low participation of women in politics.⁶⁰ MDG 3 stands for gender equality and empowering women and in particular, targets 3.3 stands for the proportion of seats held by women in national parliament, which has not been achieved by Mauritius.⁶¹

As a response to the low participation of women in politics, Mauritius has introduced a new gender law quota in 2012, aimed at ensuring that one third of the local election candidates are women. The increase in women's representation rose from 6.4 percent to 26.2 percent; as a result of the Local Government Act of 2011. The representation of women in the Government is the following:⁶²

- 330 women or 26.2 percent in the Local Government (out of 1260 seats)⁶³
- 33 women or 36.6 percent won seats (out of 90 councillors in municipal councils)
- 297 women or 25.4 percent won seats (out of 1170 village council seats)⁶⁴

As displayed in Figure 3, as of last elections in 2014, there are 8 women in the Parliament, out of 69 seats, representing a total of 11.6% of Women and leaving Mauritius at 144 place.⁶⁵ In addition, a parliamentary gender caucus is expected to be set up throughout FY 16/17. The Ministry of Public Infrastructure and Land Transport has 62 percent female staff, with 67 percent and 80 percent for the Finance and Human Resources sections, respectively. In the Transport Management and Road Safety Unit there are 8 female staff, out of a total 113.

Figure 3: *Members of Parliament by Gender*. Source: Women in Parliament, World Classification⁶⁶

⁵⁹ <http://www.sadc.int/issues/gender/>

⁶⁰ <http://www.ipsnews.net/2012/01/mauritius-women-find-a-political-voice-locally/>

⁶¹ http://www.mu.undp.org/content/dam/mauritius_and_seychelles/docs/Procurement/Government-Report/Millennium%20Development%20Goals%20Final%20National%20Report%202015%20pdf.pdf

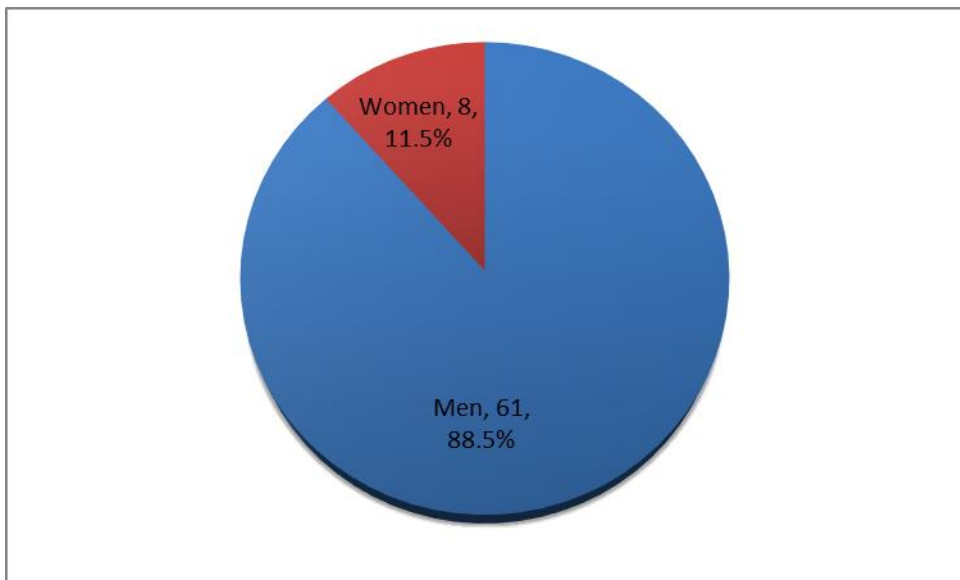
⁶² <http://www.sardc.net/en/southern-african-news-features/mauritius-gender-quota-law-a-small-but-positive-step-forward/>

⁶³ After the December 2012 elections

⁶⁴ <http://genderlinks.org.za/programme-web-menu/a-press-releases/yes-we-can-mauritius-quadruples-the-level-of-women-in-local-government-2012-12-14/>

⁶⁵ <http://genderlinks.org.za/programme-web-menu/a-press-releases/yes-we-can-mauritius-quadruples-the-level-of-women-in-local-government-2012-12-14/>

⁶⁶ <http://www.ipu.org/wmn-e/classif.htm>



Health

Impacts of climate changes will have a negative effect on both women and men's health, with a more detrimental impact on women, if gender equality is not addressed on time. The disproportionate impact on women's nutrition and health can be contributed to their limited access to and control over services. Women have negligible participation in decision-making and are not involved in the distribution of environmental management benefits. Consequently, women are less able to confront vulnerabilities associated with climate change. The inequalities are multifaceted, due to tradition and cultural barriers, gender insensitivities, or how development service agents go about creating awareness, assistance, and feedback amongst the development community for more responsive actions.

Mauritius has made significant progress in advancing women's health and decreasing the maternal mortality ratio (MRR) from 66 per 100,000 live births in 1990 to 15 per 100,000 live births in 2002. Although the progress made is certainly a step forward in Mauritius's development, it is not enough to achieve the MDG 5 target of reducing maternal mortality ratio by three-quarters between 1990 and 2015 (17 per 100,000 live births).⁶⁷

Labour

The labour market is characterized with lower employment levels for women and wide gender wage gaps. As of 2014, the share of women in wage employment was 40 percent for the non-agricultural sector.⁶⁸ The generated division in labour leads to limited access to formal and income-generating job opportunities for women. The labour-market participation rate is also relatively low for women. Women are primarily responsible for taking care of the households and the family and due to gender discrimination, deeply-rooted social norms and lack of sensibilisation, they are not able to be competitive in the labour market. Women also have unequal access to land, information and decision-making. Due to certain gender stereotypes, women are often categorized as suitable for only certain category of work, such as repetitive and manual work such as sewing in the garment sector or picking and packing products in the horticultural sector.⁶⁹

Policies with the potential to activate female labour market participation include: implementation of a special fiscal regimes favouring women's labour, affirmative action measures to discriminate in favour of women in the labour market, and public provision of child care.⁷⁰ Employment policies for young people ages 15 to 24 deserve further support. The number of individuals within this age group enrolled in some form of education or training has been increasing in recent years, while the number of individuals neither in school nor working has decreased considerably. Several youth-related policies have been already implemented in Mauritius.

⁶⁷ http://www.mu.undp.org/content/dam/mauritius_and_seychelles/docs/Procurement/Government-Report/Millennium%20Development%20Goals%20Final%20National%20Report%202015%20pdf.pdf

⁶⁸ http://www.mu.undp.org/content/dam/mauritius_and_seychelles/docs/Procurement/Government-Report/Millennium%20Development%20Goals%20Final%20National%20Report%202015%20pdf.pdf

⁶⁹ <http://www.oecd.org/site/tadicite/48735530.pdf>

⁷⁰ http://www.ilo.org/public/portugue/region/eurpro/lisbon/pdf/equality_07.pdf

Poverty

Climate change affects men and women differently - which in turn affects exposure to poverty - depending on their roles and responsibilities in the household and community. In many communities, climate change has a disproportionately greater effect on women. Women and men's roles in society both contribute and both effect change, yet their contributions are unequally recognized. Alleviating energy poverty and achieving poverty eradication requires full acknowledgment of the roles of women and men in effecting change.

Female-headed households, households with 3 or more children, households headed by divorced/separated women or men, households headed by persons with low education attainment, single member households and households with 6 or more members are more likely to be in relative poverty. Poverty is higher in households headed by women and those with education below secondary level. In 2012, the share of women in relative poverty stood at 10.5 percent (66,700) against 9.0 percent (56,000) for males. For female-headed households, however, poverty increased from 13 percent in 2007 to 18 percent in 2012, increasing the gap relative to male-headed households.⁷¹

In that respect, a Programme for Support to Women and Children in Distress is currently being implemented to provide financial support to NGOs, CBOs, and Non State Actors working for the welfare of women and children in distress. The Government of Mauritius is also implementing a "Back to Work" Programme for women over 30 years who wish to rejoin the labour force by providing special training schemes to prepare women for specific occupations such as child-carers or cleaners, for which hiring needs have been assessed.

Violence Against Women

Through the years, several indices have been developed to quantify the concept of gender inequality. The United Nations Development Programme uses the Gender Inequality Index (GII) and Gender Development Index (GDI).⁷² The GII is a composite measure that shows inequality in achievement between women and men in reproductive health, empowerment and the labour market while measuring achievement in human development in three areas: health, education, and command over economic resources. The GDI considers the gender gaps on human development between men and women.

Mauritius has a GII of 0.375 as of 2013 and ranks 72 out of 187 countries assessed. The GDI value as of 2013 is 0.957, which has ranked Mauritius as 72⁷³.

The Global Gender Gap Index (GGGI) of the World Economic Forum examines the gap between men and women in four categories: economic participation and opportunity, educational attainment, health and survival and political empowerment.⁷⁴ Out of 142 countries, Mauritius is ranked at 106 based on the GGGI 2014 results given below⁷⁵:

Description	Score	Rank	Sample average
Economic participation and opportunity	0.551	121	0.596
Educational attainment	0.989	79	0.935
Health and survival	0.980	1	0.960
Political empowerment	0.097	107	0.214
Overall Gender Gap Index 2014	0.654	106	

* Inequality = 0.00; Equality = 1.00. Source: The Global Gender Gap Report 2014

Additionally, Out of 2,301 cases of domestic violence recorded in 2014, at the level of the Ministry of Gender Equality, Child Development and Family Welfare, 90 percent of the victims were women.

⁷¹2012 Poverty Analysis Report, Statistics Mauritius, October 2015

⁷² United Nations Development Programme. Human Development Report. <http://hdr.undp.org/en/content/table-4-gender-inequality-index>.

⁷³ <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>

⁷⁴ World Economic Forum. The Global Gender Gap Report 2014 Country Profiles. <http://reports.weforum.org/global-gender-gap-report-2014/economies/#economy=ETH> http://www3.weforum.org/docs/GGGR14/GGGR_CountryProfiles.pdf.

⁷⁵ <http://reports.weforum.org/global-gender-gap-report-2014/economies/#economy=MUS>

4. Legal and Administrative Framework Protecting Women and Protecting Gender Equality

The Ministry of Gender Equality, Child Development and Family Welfare has adopted a Rights-based Approach to implement its policies and programmes for women's empowerment and the promotion of gender equality. The Ministry, through the Gender Unit, operates at two levels a) Policy Level and b) Programming level.

At a Policy level, the Ministry assists line Ministries to create their sectoral gender policies, provide technical assistance to all Ministries in the formulation of their Sector Gender Policies and aims at setting up Gender cells at the level of each Ministry. At a Programming level, the Ministry works toward women's empowerment and gender equality through capacity building, awareness-raising, inculcating a woman's entrepreneurship culture, and networking for advocacy and gender issues. Under the Ministry, there are two Councils namely, the National Women's Council and the National Women Entrepreneur Council.

The National Women's Council's main objective is to establish effective communication with women organizations and to ensure the coordination of groups of women. It also assists in the implementation of gender policies and in the evaluation of Government policies, related to gender. The National Women's Council also identifies and recommends to the National Committee actions and projects, aimed at women development and integration.

The Government has also taken the following actions towards gender quality:

- Mauritius has ratified the Convention for the Elimination of All Forms of Discriminations Against Women (CEDAW);
- Mauritius is party to the 1997 SADC Declaration on Gender
- Mauritius is party to the 1998 Addendum on the Prevention and Eradication of Violence against Women and Children,
- Mauritius has signed the African Union Declaration on Gender Equality in 2004
- Mauritius has signed the Commonwealth Plan of Action on Gender Equality 2005-2015.
- Mauritius has signed and ratified the Protocol on the Rights of Women of the African Charter on Human and People's Rights in 2005.⁷⁶

5. Gender issues in Renewable Energy and Transport Sector

It is important to note that in order to create transformational change, women are not just seen as climate change victims or beneficiaries. Women are imperative to climate change mitigation efforts. By utilising existing skills into project design and implementation and by providing a platform in which to empower women enables women's influence to rise from a household to a community and national level. Leadership and decision-making capacities and opportunities increase.

Women from the poorest households often pay the most, sacrifice the most, are the most disadvantaged and the least resilient.

Women are impacted differently by climate change in the following ways:

- In some societies more women are dying during natural disasters because men receive preferential treatment in rescue and relief efforts.

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<http://www.unesco.org/education/edurights/media/docs/7526a4d03a2047d7db44ad3f63c982f80d75501e.pdf>

- Women are disproportionately affected and due to vulnerability of climate change, are affected by various factors, including age, education, social status, wealth, access to resources, sex, gender and many other social dimensions;
- In addition at the time of crisis, women's needs are not considered priority in recovery programmes.

Energy sector

The two main sources of energy for the households are electricity, accounting for 51 percent and LPG, accounting for 42 percent out of the total energy consumption. Women's main role in the society is to provide food for the family, which is entirely dependent on energy supply. Energy interventions are needed in order to address women's energy needs and policy interventions to promote gender equitable access to energy. As a response, the Government of Mauritius has undertaken measures to transform the country by increasing the use of renewable energy, part of the adopted Long-Term Energy Strategy for 2009-2025.⁷⁷

Transport Sector

There are two main gender issues in the transport sector of Mauritius. Firstly, given that public bus is the main form of transportation and women are primarily using buses to commute to work, improvements need to be made towards more energy-efficient and environmental friendly buses, with higher capacities to accommodate a bigger percentage of the society. Secondly, women's political representation in the transport sector is relatively high, in comparison with other sectors. However, women do not occupy high decision making positions and are mainly at the support level. Opportunities for women, to grow further in their career development in the transport sector, must be provided.

6. Recommendations

Gender analysis

The gender analysis undertaken at the onset and design of this project acts as an entry point for gender mainstreaming throughout implementation. Preliminary Local Project Appraisal Committee Meeting (LPAC) consultations took place at the UNDP Mauritius Country Office. Results from the consultations are detailed below in the Stakeholder engagement section further below.

The gender analysis, through stakeholder engagement and consultation enabled:

- Assessment of the gender-related activities in responding to the expanding threat of climate change on the energy and transport sector, including gender roles and responsibilities, resource use and management, and decision making raised by the project;
- Demonstration of the need for gender-disaggregated data and indicators to establish a baseline in which to measure improvements and identify areas of focus; and
- Establishment of recommendations to incorporate into the Gender Action Plan.

Stakeholder engagement

The stakeholder consultations and engagement of women's organizations promote gender equality at the local as well as at national level. The involvement of women's organizations in the project design, will assist in the identification of relevant gender issues within the country's social context, and implementation and monitoring of gender aspects of the project.

⁷⁷ <http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Sustainable%20Energy/w ea%202000/chapter2.pdf>

The results captured as are follows:

- At programme management level, participation of women at the level of the Board and sub-board will be encouraged. In addition, a representative of the Ministry of Gender Equality will be specifically invited, as well as a representative of Women’s organisations.
- Staff capacity building and trainings of relevant stakeholders will be organized, as detailed in Section H of the proposal, where specific targets are set in terms of numbers of women to be trained;
- The appointment of a gender and M&E focal point for the programme to enable:
 - The prompt identification of the issues and challenges that hinder men, women in accessing from the programme
 - The monitoring and evaluation of Number of women and men as beneficiaries of training, jobs and opportunities arising from the programme;
 - The implementation of measures to correct any gender imbalance in the programme implementation.

The Gender and M&E focal point can be one of the already designated programme staff, such as the programme assistant.

The recommendations by the ministries include:

- Actively engage local stakeholders in the design, implementation and monitoring of the project;
- Staff capacity building and training of relevant stakeholders;
- Staff capacity building on gender and climate change analysis, planning, budgeting and mainstreaming;
- Implementation of public awareness and sensitization programmes on the effects of climate change and the benefits of project interventions;
- Community level awareness raising at all levels;
- Identification of the issues and challenges that hinder men, women in accessing all levels of policy and decision-making processes;

Proposed Gender Action Plan

This Gender Action plan provides suggested entry points for gender-responsive actions to be taken under each of the Activity areas of the project. In addition, specific indicators are also proposed to measure and track progress on these actions at the activity level. This can be incorporated into the detailed M&E plan which will be developed at the start of implementation, and provides concrete recommendations on how to ensure gender (including disaggregated data) continues to be collected and measured throughout implementation.

Objective	Action	Indicator	Responsible
Output 1 – Institutional strengthening for renewable energy			
Institutional strengthening of the MARENA	<p>Ensure that gender-disaggregated data is collected</p> <p>Include female-headed households and ensure that they have equal participation in the project</p> <p>Strengthen national level research and research capacities</p> <p>Review all documents from gender and climate change perspective</p>	<p>Number of women and men in gender-disaggregated level data available in the energy and transport sectors</p> <p>Number of women and men Involved in the program</p> <p>Number of women and men engaged in research through the project</p> <p>Documents reviewed through the project</p>	Programme manager Project manager based at MARENA

Objective	Action	Indicator	Responsible
Policies and regulations that take into account the gender aspects of access to renewable energy	Identify the information needs and contributions of both men and women to inform a valuable policies and regulations on renewable energy Ensure information collected is differentiated by gender	Number of policies and regulations that address gender aspects of access to renewable energy Number of women and men engaged in the generation of information and formulation of policies	Programme Manager
Output 2: Grid strengthening and PV deployment			
Ensure socio-economic and gender profiling of PV beneficiaries with the intent to reach out to lower-income households and women-headed households	Identify women-headed households as final beneficiaries and ensure that lower-income households are being targeted Introduction of technical training for women on the installation, operation and maintenance of solar PV systems Training of female staff in micro-enterprises to understand the technical aspects of PV systems	Total number of women and men beneficiaries of the project Number of women trained in understanding the technical aspects of PV systems Number of female staff trained	Programme Manager
Improved quality of life and increased employment opportunities of final beneficiaries	Monitor improvements in energy management through data collection Encourage MARENA to attain 30% women MARENA staff At least 33% participation of women in commercial PV-related activities.	Reduced electricity bills Total number of men and women beneficiaries of project	Programme Manager/Project Manager based at CEB
Output 4: Energy-efficient public transport			
Increased number of female bus drivers, female mechanics and female conductors	Coordinate in identifying women engaged in the transport sector Provide technical and administrative support Liaise with the Ministry of Public Transport to help inform women of the availability of job opportunities	Number of female bus drivers, mechanics and conductors to increase by 5%, employed through the project Number of male/female beneficiaries in the female-headed households	Programme Manager/project Manager based at Ministry of Transport

International agreements relevant to gender and climate change

Year	International Agreement	Environmental Relevance	Gender Relevance
1948	UN Universal Declaration	No specific mention of environment but	Establishes core human rights but with a limited

	of Human Rights (UNDHR)	acknowledges fundamental human rights that are linked to and dependent upon a healthy environment	gender perspective
1979	Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)	Calls for governments to ensure that women participate at all levels of decision-making concerned with environmental sustainability, and that women's interests and perspectives are adequately reflected in all policies and approaches adopted	The first international treaty to recognize women's human rights
1992	Agenda 21 and the Rio Declaration on the Environment and Development	This provided the first international precedent for including the gender perspective in promoting sustainable development. It adopted a gender perspective in all development and environment policies and programmes, leading to the promotion of women's effective participation in the proper use of natural resources;	
1992	UN Convention on Biological Diversity (UNCBD)	The first global agreement focused on conservation and sustainable use of biodiversity	Explicitly addresses women's participation and „recognises the vital role that women play in conservation and sustainable use of biological diversity, emphasizing the need for the full participation of women at all levels of policymaking and implementation for biological diversity conservation'
1992	UN Framework Convention on Climate Change (UNFCCC)	Acknowledges human interference with the climate and aims to stabilise concentration of GHGs in the atmosphere	Absence of any mention of gender
1994	UN Convention to Combat Desertification (UNCCD)	The only legally binding international agreement dealing with land degradation	Promotes the equal participation of men and women and recognises „the important role played by women in regions affected by desertification and/or drought, particularly in rural areas of developing countries, and the importance of ensuring the full participation of both men and women at all levels in programmes to combat desertification and mitigate the effects of drought'
1995	Beijing Declaration and Platform for Action	This makes the link between gender, the environment and sustainable development. Chapter K draws attention to women's poverty and the need for women to participate in decision-making about the environment at all levels, as well as the integration of gender in all sustainable development policies and programmes.	
2000	Millennium Declaration and MDGs	Includes goal on environmental sustainability (but with no linkage to gender)	Promotes gender equality but without making linkages with environment
2005	Kyoto Framework for Action	The first internationally accepted framework on disaster risk reduction (DRR), setting out objectives and priorities for policies at national level over the next decade.	Recognises that a gender perspective should be integrated into all DRR policies, plans and decision-making processes, including those associated with existing climate variability and future climate change.
2007	UN Declaration on the Rights of Indigenous Peoples (UN DECRIPS)	Acknowledges rights to forests and community lands.	Establishes rights of minorities but with limited gender perspective.

(Adopted and Drawn from Raczek et. al. 2010)

Summary of gender differences in vulnerability and adapting to disasters

Disparities that increase risks for women in disasters <ul style="list-style-type: none"> • Higher levels of poverty • Extensive responsibilities of caring for others • Domestic violence • Traditional women's occupations 	Disparities that increase risks for men in disasters <ul style="list-style-type: none"> • Occupational segregation • Internalized norms of masculinity • Roles in the family and in the home
Gender experiences that can increase capacities for managing disaster situations: Women	Gender experiences that can increase capacities for managing disaster situations by: men

- **Social networking**
- **Caring abilities**
- **Extensive knowledge of communities**
- **Management of natural and environmental resources**
- **High levels of risk awareness**

- **Professional and work contacts**
- **Technical abilities**
- **Limited childcare responsibilities**

Annex 8: Map of project location(s)

[FP-UNDP-201016-5681-Annex IX \(Maps\).zip](#)

Annex 9: Monitoring Plan

The Project Coordinator and Project Managers will collect results data according to the following monitoring plan.

Monitoring	Indicators	Description	Data source / Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
SDG indicator	<i>Indicator 1</i>	Indicator 13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities	<i>Project progress reports, international development assistance, terminal evaluation report</i>	Annually	<i>Project Coordinator</i>	<i>Review of project progress reports, development assistance agreements, and M&E reports</i>	Assumptions: <ul style="list-style-type: none"> Government maintains policy of promoting low-carbon economy Risks: <ul style="list-style-type: none"> Change in government results in revised policies Global factors result in decreasing development assistance
	<i>Indicator 2</i>	Indicator 7.2.1: Renewable energy share in the total final energy consumption	<i>Government statistics, Project monitoring reports, terminal evaluation report</i>	Annually	<i>Project Coordinator, M&E Consultant</i>	<i>Review of government statistics, project progress reports, and M&E reports</i>	Assumptions: <ul style="list-style-type: none"> Government maintains policy of promoting RE Risks: <ul style="list-style-type: none"> Change in government results in revised policies Procurement and/or installation delays
UNDP Strategic Plan IRRF Indicators	<i>Indicator 1</i>	Indicator 1.4.2: Number of countries with comprehensive measures - plans, strategies, policies, programmes and budgets - implemented to achieve low-emission and climate-resilient development objectives	<i>Government gazette, budgetary allocations, project progress reports, terminal evaluation report</i>	Annually	<i>Project Coordinator</i>	<i>Review of published government gazette, project progress reports, and M&E reports</i>	Assumptions: <ul style="list-style-type: none"> Government maintains policy of promoting low-carbon economy Risks: <ul style="list-style-type: none"> Change in government results in revised policies
	<i>Indicator 2</i>	# direct project beneficiaries.	<i>Project progress reports, independent monitoring reports, terminal evaluation report</i>	Annually	<i>Project Coordinator, M&E Consultant</i>	<i>Review of project progress and M&E reports, field visits to statistical representative sampling of beneficiaries</i>	Assumptions: <ul style="list-style-type: none"> Grid Absorption Capacity improvement completed Based on estimate of low-emission MW divided by effective capacity of the power system, multiplied by total number of

Monitoring	Indicators	Description	Data source / Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
							households / household composition in Mauritius and Rodrigues Risks: <ul style="list-style-type: none"> • Procurement and/or installation delays • Capacity shortfalls constrains project results
Fund level Impact M1.0 Reduced emissions through increased low-emission energy access and power generation	Indicator 1	Tonnes of carbon dioxide equivalent (tCO ₂ eq) reduced or avoided as a result of Fund funded projects / programmes	Project progress reports, third-party calculations, <i>terminal evaluation report</i>	Annually	Project Coordinator, M&E Consultant	Review of project progress and M&E reports	Assumptions: <ul style="list-style-type: none"> • Estimation over lifetime of project (8 years) and not equipment lifetime • CEB meets its target of a total of 185 MW installed capacity during project lifetime • Mid-term is end-2020 • The procurement process is efficient and timely • Low staff turnover for the duration of the project, ensuring there is no discontinuity • Phase 1 of the GCF project is completed on time and there is a smooth flow of funds into Phase 2 Risks: <ul style="list-style-type: none"> • Costs higher than anticipated, resulting in lower installed capacities
Project Outcome M5.0 Strengthened institutional and regulatory systems	Indicator 1	Institutional and regulatory systems that improve incentives for low-emission planning and development and their effective implementation	<i>Government gazette, terminal evaluation report</i>	<i>Annually</i>	<i>Project Coordinator</i>	<i>Review of published government gazette, review of project M&E reports</i>	Assumptions: <ul style="list-style-type: none"> • Government remains committed to establishment of MARENA Risks: <ul style="list-style-type: none"> • Change in government results in revised policies • Capacity shortfalls hinder implementation

Monitoring	Indicators	Description	Data source / Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
Project Outcome M6.0 Increased number of small, medium and large low-emission power suppliers	Indicator 1	Proportion of low-emission power supply in a jurisdiction or market	<i>Government statistics, project progress reports, terminal evaluation report</i>	<i>Annually</i>	<i>Project Coordinator, M&E Consultant</i>	<i>Review of published government gazette, review of project progress and M&E reports</i>	Assumptions: <ul style="list-style-type: none"> Grid Absorption Capacity improvement completed Risks: <ul style="list-style-type: none"> Costs higher than anticipated, resulting in lower installed capacities
	Indicator 2	Number of households, and individuals (males and females) with improved access to low-emission energy sources	<i>Project progress reports, government statistics, terminal evaluation report</i>	<i>Annually</i>	<i>Project Coordinator, M&E Consultant</i>	<i>Review of government statistics, review of project progress and M&E reports</i>	Assumptions: <ul style="list-style-type: none"> Based on estimate of low-emission MW divided by effective capacity of the power system, multiplied by total number of households / household composition in Mauritius and Rodrigues Risks: <ul style="list-style-type: none"> Costs higher than anticipated, resulting in lower installed capacities Procurement and/or installation delays
Project Output 1.1 Institutional strengthening of the Mauritius Renewable Energy Agency	Indicator 1	Renewable Energy Agency Act in place	<i>Government gazette, terminal evaluation report</i>	<i>Annually</i>	<i>Project Coordinator</i>	<i>Review of published government gazette, review of project M&E reports</i>	Assumptions: <ul style="list-style-type: none"> Government maintains policy of promoting RE Risks: <ul style="list-style-type: none"> Change in government results in revised policies Institutional barriers to hiring new staff
	Indicator 2	Institution staffed by mid-term	<i>Staffing records, project progress reports, midterm review reports, terminal evaluation report</i>	<i>Annually</i>	<i>Project Manager 1</i>	<i>Review of staffing records, review of project progress and M&E reports</i>	
Project Output 2.1 Improving Grid Absorption Capacity to accept 185 MW intermittent RE	Indicator 1	Software purchased	<i>Proof of purchase, project progress reports, terminal evaluation report</i>	<i>Procurement milestones</i>	<i>Project Manager 2</i>	<i>Review of proof of purchase records, review of project progress and M&E reports</i>	Assumptions: <ul style="list-style-type: none"> Government maintains policy of promoting RE Risks: <ul style="list-style-type: none"> Costs higher than anticipated, resulting in lower installed capacities Procurement and/or installation delays
	Indicator 2	Battery energy storage system procured	<i>Procurement records, project progress reports, midterm review reports, terminal evaluation report</i>	<i>Procurement milestones</i>	<i>Project Manager 2</i>	<i>Review of procurement records, review of project progress and M&E reports</i>	
Project Output 2.2 Smart grid	Indicator 1	Advanced Distribution Management system	<i>Commissioning records, project progress reports, midterm review</i>	<i>Annually</i>	<i>Project Manager 2</i>	<i>Review of commissioning records, field visits, review of</i>	Assumptions: <ul style="list-style-type: none"> Government acknowledges the

Monitoring	Indicators	Description	Data source / Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
	<i>Indicator 2</i>	Smart Grid Strategy	Government gazette, project progress reports, midterm review reports, terminal evaluation report	Annually	Project Coordinator	Review of published government gazette, review of project M&E reports	power stability benefits of smart grids and is keen to invest further Risks: <ul style="list-style-type: none">Costs higher than anticipated, resulting in lower installed capacitiesProcurement and/or installation delays
Project Output 2.3 PV deployment	<i>Indicator 1</i>	Actual MW installed by category (gender-disaggregated data)	Commissioning records, project progress reports, midterm review reports, terminal evaluation report	Installation milestones	Project Manager 2	Review of commissioning records, field visits, review of project progress and M&E reports	Assumptions: <ul style="list-style-type: none">Price of fossil fuels does not fall markedly in the medium-term Risks: <ul style="list-style-type: none">Costs higher than anticipated, resulting in lower installed capacitiesProcurement and/or installation delays
Project Output 3.1 PV mini-grids on the outer island of Agalega	<i>Indicator 1</i>	Capacity of PV systems installed	Commissioning records, project progress reports, midterm review reports, terminal evaluation report	Installation milestones	Project Manager 3	Review of commissioning records, field visits, review of project progress and M&E reports	Assumptions: <ul style="list-style-type: none">OIDC is able to provide the budget for long-term maintenance and is supported by the Ministry of Ocean Economy Risks: <ul style="list-style-type: none">Costs higher than anticipated, resulting in lower installed capacitiesProcurement and/or installation delaysCapacity shortfalls hinder project results
	<i>Indicator 2</i>	Number of OIDC staff trained	Training records, project progress reports, midterm review reports, terminal evaluation report	Annually	Project Manager 3	Review of training records, review of project progress and M&E reports	
Mid-term Review	N/A	N/A	To be outlined in MTR inception report		Independent evaluator	Completed MTR	
Environmental and Social risks and management plans, as relevant.	N/A	N/A	Updated SESP and management plans	Annually	Project Manager UNDP CO	Updated SESP	
Gender action plan as relevant							
Stakeholder engagement plan as relevant							

Annex 10: Evaluation Plan

Evaluation Title	Planned start date Month/year	Planned end date Month/year	Included in the Country Office Evaluation Plan	Budget for consultants ⁷⁸	Other budget (i.e., travel, site visits etc.)	Budget for translation
Terminal Evaluation	Aug 2024	Oct 2024	Yes	USD 36,000	USD 7,500	Not Applicable
Total evaluation budget				USD 43,500		

⁷⁸ The budget will vary depending on the number of consultants required (for full size projects should be two consultants); the number of project sites to be visited; and other travel related costs. Average # total working days per consultant not including travel is between 22-25 working days. USD 30,000 are allocated for an international consultant(s), and USD 6,000 for national consultant support.

Annex 11: Timetable of Project Implementation

	2017	2018	2019	2020	2021	2022	2023	2024	2025																				
	PHASE 1										PHASE 2																		
QUARTER	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
TASK																													
Component 1	Institutional Strengthening for Renewable Energy																												
<u>Output 1.1</u>	RENEWABLE ENERGY AGENCY FUNCTIONING BY END 2018																												
Activity 1.1.1. Preparation of legislation																													
Activity 1.1.2. Capacity building for MARENA staff																													
Component 2	Improving Grid Absorption Capacity and PV deployment																												
<u>Output 2.1</u>	GRID STRENGTHENED BY MID-2018																												
Activity 2.1.1. Installation of AGC system by CEB																													
Activity 2.1.2. Battery energy storage system installed																													
Activity 2.1.3. Training programme																													
<u>Output 2.2</u>	SMART GRID DEPLOYMENT – ADMI AND ASSOCIATED EQUIPMENT BY MID 2019																												
Activity 2.2.1 ADMS																													
Activity 2.2.2 Capacity building on smart grid management																													

	2017	2018	2019	2020	2021	2022	2023	2024	2025																													
	PHASE 1										PHASE 2																											
QUARTER	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2										
TASK																																						
Activity 2.2.3 Long-Term Smart Grid Strategy developed																																						
Output 2.3															SUPPORTING PV DEPLOYMENT																							
Activity 2.3.1 SSDG Phase 4 for NGOs and households																																						
Activity 2.3.2 SSDG Phase 4 for public buildings																																						
Activity 2.3.3. Expansion of PV usage on public buildings																																						
Component 3	PV Mini-Grids on the Outer Island of Agalega																																					
Output 3.1															PV MINI-GRIDS ON AGALEGA																							
Activity 3.1.1. Procurement and shipping of PV panels and batteries to Agalega																																						
Activity 3.1.2. Commissioning of PV systems and training of local inhabitants																																						
Activity 3.1.3 Training of local inhabitants and OIDC staff																																						
Programme Board																																						

	2017	2018	2019	2020	2021	2022	2023	2024	2025																				
	PHASE 1										PHASE 2																		
QUARTER	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
TASK																													
Evaluations																													

Annex 12: Procurement Plan

The procurement plan will cover a 12 month period. The National Implementation Agency shall update the procurement plan throughout the duration of the project at least annually by including contracts previously awarded. All procurement plans, their updates or modifications shall be published on the website of the National Implementation Agency.

General Information

Project Name: Accelerating the transformational shift to a low-carbon economy in the Republic of Mauritius	
Country: Mauritius	Executing Agency: Ministry of Finance and Economic Development (MoFED)
Loan Amount: N/A	Loan (Grant) Number: ...
Date of First Procurement: 2nd Quarter 2017	Date of this Procurement Plan: January 2017

A. Process Thresholds, Review and 12 Month Procurement Plan

1. Project Procurement Thresholds

1. The following UNDP procurement thresholds shall apply to procurement of goods and works:

Procurement method	Contract value	Type of requirement	Method of solicitation	Type of competition
Micro-purchasing	Below US \$5,000	Goods, services or simple works	Canvassing (by phone, Internet, shopping, etc.)	Limited international or national
Request for quotation	US \$5,000 to \$149,999	Goods, services or simple works	Written request for quotation	Limited international or national
Invitation to bid	US \$150,000 and above	Goods or works	Advertisement in international media	Open international
Request for proposal	US \$150,000 and above	Services	Advertisement in international media	Open international
Direct contracting	Any amount within permissible circumstances	Services, goods or works	Direct invitation or negotiation	None

2. Prior or Post Review

2. The following UNDP prior or post review requirements apply to the various procurement and consultant recruitment methods used for the project. Please see Annex 1

3. Goods and Works Contracts Estimated (USD 10,449,732)

3. The following table lists goods and works contracts for which procurement activity is either ongoing or expected to commence within the first 12 months.

General Description	Contract Value USD (cumulative)	Procurement Method	Prequalification of Bidders (yes/no)	Advertisement Date (quarter/year)	Comments
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Procure/install information technology, Output 1	93,000	Request Quotation	No	Qtr 3 / 2017	
Supplies and consumables, Output 1	46,000	Request Quotation	No	Qtr 3 / 2017	
Activity 2.1.1 Installation of AGC system by CEB	1,000,000	International Advert	Yes	Qtr 3 / 2017	
Activity 2.1.2 Battery energy storage system installed	9,027,972	International Advert	Yes	Qtr 3 / 2017	
Supplies and consumables, Output 2	115,000	Request Quotation	No	Qtr 3 / 2017	
Office furniture and equipment for PCU and PMU offices	5,410	Request Quotation	No	Qtr 2 / 2017	
Mobile telephones for project coordinator and managers	4,000	Micro Purchasing	No	Qtr 2 / 2017	
Office supplies for PCU/PMU offices	7,200	Request Quotation	No	Qtr 2 / 2017	
Laptop computers for PCU/PMU staff members and IT equipment for PCU/PMU offices	22,950	Request Quotation	No	Qtr 2 / 2017	
Service contractors for telephone, internet, insurance	96,000	Request Quotation	No	Qtr 2 / 2017	
Catered venue for inception workshop	11,000	Request Quotation	No	Qtr 2 / 2017	
Catered venue for board meetings	16,000	Request Quotation	No	Qtr 4 / 2017	
Catered venue for sub-board meetings	5,200	Request Quotation	No	Qtr 4 / 2017	

4. Consulting Services Contracts Estimated (USD 2,476,362)

4. The following table lists consulting services contracts for which procurement activity is either ongoing or expected to commence within the first 12 months.

General Description	Contract Value USD (cumulative)	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
Project Coordinator	566,687	International Advert	Qtr 2 / 2017	International	
Finance Assistant	212,508	International Advert	Qtr 2 / 2017	National	
Project Coordinator Assistant	182,149	International Advert	Qtr 2 / 2017	National	
Project Manager, Output 1	120,591	Desk Review	Qtr 2 / 2017	National	
Project Manager, Output 2	333,940	International Advert	Qtr 2 / 2017	National	
Project Assistant, Output 1	65,777	Desk Review	Qtr 2 / 2017	National	
Project Assistant, Output 2	182,149	International Advert	Qtr 2 / 2017	National	
Chief Technical Advisor, Output 1	304,523	International Advert	Qtr 2 / 2017	International	
Preparation of Legislation, Activity 1.1.1	56,038	Desk Review	Qtr 3 / 2017	National	
Consultancy services BESS, Output 2	150,000	International Advert	Qtr 3 / 2017	International	
Training programme AGC, Activity 2.1.3	50,000	Desk Review	Qtr 3 / 2017	National	
Monitoring & evaluation specialist	72,000	Desk Review	Qtr 2 / 2017	National	
Gender-social inclusion specialist	72,000	Desk Review	Qtr 2 / 2017	National	
Miscellaneous services, training, KM, PR	68,000	Desk Review	Qtr 4 / 2017	National	
Professional services, financial auditing	40,000	Desk Review	Qtr 4 / 2017	National	

B. Indicative List of Packages Required Under the Project

5. The following table provides an indicative list of all procurement (goods, works and consulting services) over the life of the project.

PROCUREMENT METHOD 1: GOODS AND WORKS

General Description	Estimated Value USD (cumulative)	Estimated Number of Contracts	Procurement Method 1	Comments
Mobile telephones for project coordinator and managers	4,000	2	Micro Purchasing	Goods
Catered venue for MTR and TE debriefing meetings	1,500	3	Micro Purchasing	Works

PROCUREMENT METHOD 2: GOODS AND WORKS

General Description	Estimated Value USD (cumulative)	Estimated Number of Contracts	Procurement Method 2	Comments
Procure/install information technology, Output 1	93,000	1	Request Quotation	Goods
Supplies and consumables, Output 1	46,000	3	Request Quotation	Goods
Procure/install information technology for BESS, Output 2	9,000	1	Request Quotation	Goods
Supplies and consumables, Output 2	115,000	8	Request Quotation	Goods
Supplies and consumables, Output 3	26,000	2	Request Quotation	Goods
Office furniture and equipment for PCU and PMU offices	5,410	2	Request Quotation	Goods
Office supplies for PCU/PMU offices	7,200	1	Request Quotation	Goods
Laptop computers for PCU/PMU staff members and IT equipment for PCU/PMU offices	22,950	2	Request Quotation	Goods
Service contractors for telephone, internet, insurance	96,000	3	Request Quotation	Works
Catered venue for inception workshop	11,000	1	Request Quotation	Works
Catered venue for board meetings	16,000	16	Request Quotation	Works
Catered venue for sub-board meetings	5,200	1	Request Quotation	Works

PROCUREMENT METHOD 3: GOODS & WORKS

General Description	Estimated Value USD (cumulative)	Estimated Number of Contracts	Procurement Method 3	Comments
Activity 2.1.1 Installation of AGC system by CEB	1,000,000	1	International Advert	Goods
Activity 2.1.2 Battery energy storage system installed	9,027,972	1	International Advert	Goods
Activity 2.2.1 ADMS	1,594,273	1	International Advert	Goods
Activity 2.3.1 SSDG Phase 4 for NGOs and households	5,828,199	1	International Advert	Goods
Activity 2.3.2 SSDG Phase 4 for public buildings	5,698,163	1	International Advert	Goods
Activity 2.3.3 Expansion of PV usage on public buildings	400,434	1	International Advert	Goods
Activity 3.1.1 Procurement and shipping of PV panels and batteries to Agalega	271,735	1	International Advert	Goods
Activity 3.1.2 Commissioning of PV systems and training of local inhabitants	294,918	1	International Advert	Works

CONSULTANCIES

(a) RECRUITMENT METHOD 1

General Description	Estimated Value USD (cumulative)	Estimated Number of Contracts	Recruitment Method 1	Comments
Project Manager, Output 1	120,591	1	Desk Review	Services

Project Manager, Output 3	83,439	1	Desk Review	Services
Project Assistant, Output 1	65,777	1	Desk Review	Services
Project Assistant, Output 3	45,512	1	Desk Review	Services
Preparation of Legislation, Activity 1.1.1	56,038	1	Desk Review	Services
Renewable energy technical studies, Output 1	143,345	1	Desk Review	Services
Capacity building MARENA, Activity 1.1.2	144,667	1	Desk Review	Services
Consultancy services for smart grid, Output 2	70,000	1	Desk Review	Services
Develop long-term smart grid strategy, Activity 2.2.3	50,000	1	Desk Review	Services
Training programme AGC, Activity 2.1.3	50,000	1	Desk Review	Services
Capacity building on smart grid, Activity 2.2.2	100,000	1	Desk Review	Services
Training of local inhabitants and OI DC, Activity 3.1.3	39,496	1	Desk Review	Services
Midterm reviewer for MTR 1, international consultant	24,000	1	Desk Review	Services
MTR 1 support, national consultant	6,000	1	Desk Review	Services
Midterm reviewer for MTR 2, international consultant	24,000	1	Desk Review	Services
MTR 2 support, national consultant	6,000	1	Desk Review	Services
Terminal evaluator, international consultant	30,000	1	Desk Review	Services
Terminal evaluation support, national consultant	6,000	1	Desk Review	Services
Monitoring & evaluation specialist, national consultant	72,000	1	Desk Review	Services
Gender-social inclusion specialist, national consultant	72,000	1	Desk Review	Services
Miscellaneous services, training, KM, PR, national	68,000	3	Desk Review	Services
Professional services, financial auditing, national	40,000	1	Desk Review	Services

(b) RECRUITMENT METHOD 2

General Description	Estimated Value USD (cumulative)	Estimated Number of Contracts	Recruitment Method 2	Comments
Project Coordinator	566,687	1	International Advert	Services
Finance Assistant	212,508	1	International Advert	Services
Project Coordinator Assistant	182,149	1	International Advert	Services
Project Manager, Output 2	333,940	1	International Advert	Services
Project Assistant, Output 2	182,149	1	International Advert	Services
Chief Technical Advisor, Output 1	304,523	1	International Advert	Services
Consultancy services BESS, Output 2	150,000	1	International Advert	Services
Consultancy services selection of beneficiaries to meet social req's of PV panels project, Output 2	195,200	1	International Advert	Services

UNDP Policy on Prior and Post Review

	Level 1 (Country Level): Contracts, Assets and Procurement Committee	Level 2 (Regional): Regional Advisory Committee on Procurement (country offices only)	Level 3 (HQ): Advisory Committee on Procurement
Competitive procurement process			

Any contract or series of contracts including amendments to be awarded to a vendor <i>in a calendar year</i> that in aggregate has a cumulative value:	Above US \$50,000 (above US \$100,000 for Individual Contracts) and up to the standard delegated procurement authority – Direct Review by CAP Chairperson Above the standard delegated procurement authority and up to any increased delegated procurement authority – by CAP Committee	Above the delegated procurement authority and up to US \$2 million (applies per year for Long-Term Agreements)	Country offices: above US \$2 million (applies per year for Long-Term Agreements)
Direct contracting			
Any contract or series of contracts, including amendments to be awarded to a vendor <i>in a calendar year</i> that in aggregate has a cumulative value:	Above US \$50,000 and up to 50 percent of the standard delegated procurement authority – Direct Review by CAP Chairperson Above 50 percent of the standard delegated procurement authority and up to 50 percent of any increased delegated procurement authority – by CAP Committee	Above 50 percent of the delegated procurement authority and up to US \$2 million (applies per year for long-term agreements)	Headquarters units: above 50 percent of the delegated procurement authority Country offices: above US \$2 million (applies per year for long-term agreements)
Amendment of all contracts			
Any amendment or series of amendments to a contract which, in aggregate, increases the contract value by 20 percent or the delegated procurement authority, whichever is less:	Above US \$50,000 and up to the standard delegated procurement authority – Direct Review by CAP Chairperson. Above the standard delegated procurement authority and up to the increased delegated procurement authority - by CAP Committee	Above the delegated procurement authority and up to US \$2 million (applies per year for long-term agreements)	Country offices: above US \$2 million (applies per year for long-term agreements)
Ex ante review			
Ex ante review refers to the review of the procurement strategy roadmap prior to commencement of the procurement process for complex procurement actions with a value:	N/A	Above US \$1 million and up to US \$2 million (applies per year for long-term agreements)	Above US \$2 million (applies per year for long-term agreements)
Notes:	<ol style="list-style-type: none"> 1. The procurement support unit shall participate when requested in the committee review of ex ante submissions. 2. An ex ante review is not required if: <ol style="list-style-type: none"> (a) The business unit has had a previous successful experience in the procurement of similar goods/services/works that was already subject to an ex ante review; or (b) There is sufficient specific corporate guidance and templates on the procurement of the said goods/services. 3. Irrespective of the above, the procurement authority may submit the cases for ex ante review if significant risks are perceived. 		



UNITED NATIONS DEVELOPMENT PROGRAMME GENERIC JOB DESCRIPTION

I. Position Information

Job Title:	Project Coordinator
Project Title:	'Accelerating the transformational change to a low carbon economy in the Republic of Mauritius
Classified Grade:	NO-C (proforma cost – USD 5600/month)
Supervisor:	National Project Director at the Ministry of Finance and Economic Development (MOFED)/Head of Environment Unit UNDP/Project sub-Boards/ Project Board

II. Organizational Context

Under the overall guidance of the Project Director who is a senior civil servant at the Ministry of Finance and Economic Development (MOFED) and nominated by the same ministry to chair the Project Board and UNDP Resident Representative, and the National Project Directors (NPDs), the Project Coordinator oversees all project activities.

The Project Coordinator leads and supervises the project staff (project managers, project assistants and finance associate) working in the project, ensuring cross-unit cooperation and coordination. The Project Coordinator ensures a client-oriented approach and consistency with UNDP rules and regulations in conformity with the UNDP Internal Control Framework and good management practice. The Project Coordinator advises the project board on project management, cost effectiveness and responses to emerging complex challenges in managing the project.

The Project Coordinator will be recruited based on an open competitive process. He/She will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The PM will report to the National Project Directors/Head of Environment Unit UNDP/Project Board, in close consultation with the host institution for all of the project's substantive and administrative issues. From the strategic point of view of the project, the Project Coordinator will report on a periodic basis to the Project Board and be responsible for all timely reporting to the GCF.

The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Mauritius signed in 1974 and the Country Programme Document (CPD). The Ministry of Finance and Economic Development (MOFED) being the National Designated Authority, will oversee the project execution and ensure that it is implemented in accordance with the applicable national policies.

The Implementing Partner in UNDP terminology – the Executing Entity in GCF terminology – is the entity responsible and accountable for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP/GCF resources. The incumbent will work closely with internal and external counterparts,

including Government, national institutions, civil society, private sector etc, to successfully deliver the UNDP GCF project entitled “Accelerating the transformational change to a low carbon economy in the Republic of Mauritius”. This project is made of three components as described below:

Component 1

The Ministry of Energy and Public Utilities (MEPU) is responsible for all policies relating to investment in the renewable energy sector. In the framework of the Long-Term Energy Strategy 2009-2025 and growing concerns at the projected increases in power that will be necessary in the near-future (implying considerably more fossil fuel imports) , the Government has recently reaffirmed its intention to establish the Mauritius Renewable Energy Agency (MARENA). MARENA will initially perform a coordination and investment promotion function with regard to renewables and, in particular, renewable energy Independent Power Producers (IPPs). The MEPU has requested GCF support for the creation and operationalisation of MARENA.

The principal outcome of Component 1 will be the emergence of a strengthened institutional and regulatory system for renewable energy in Mauritius, which will directly facilitate the implementation of Component 2. By the end of Component 1 (2018), the Government will have the required legal texts, systems and institutional capability to effectively manage the evolution and growth of the renewable energy sector. The promotion of renewable energy technologies and a better understanding of the sector from an investor’s perspective are expected to result in reduced GHG emissions through the scale-up of renewable power generation, both centralised and decentralised, at a national scale.

Component 2

The Central Electricity Board (CEB) is a parastatal entity under the purview of MEPU. CEB is responsible for the generation (in collaboration with Independent Power Producers), transmission and distribution of electricity. The CEB has requested GCF support for the implementation of Component 2 of the proposed project.

With the assistance of the GCF project, CEB will be enabled to acquire and install the equipment necessary to ensure 185 MW of intermittent renewable energy can be connected to the grid without jeopardising grid stability. In addition, GCF resources will be used to provide a grant to SSDG Phase 3 users to partially cover the upfront cost of investing in small- and medium-scale PV systems. Augmenting these PV installations, smart meters will be installed in SSDG Phase 3 premises so as to optimally manage the generation output of the rooftop solar PV installations and thereby lay the basis for a smart grid at national scale. The results of the implementation of the smart grid will then inform CEB on the requirements for national-scale smart grid deployment and the development of a strategy accordingly.

Component 3

The Ministry of Ocean Economy (MOE) is the parent Ministry for the Outer Islands Development Corporation. The OI DC is responsible for the management of the Outer Islands of Agalega. The Ministry of Ocean Economy has requested GCF support for the implementation of Component 3 of the proposed project.

The principal goal of Component 3 will be to transform Agalega into the first low-emission inhabited island in the Republic of Mauritius. Approximately 300 inhabitants will benefit from this development, which will involve rehabilitation of the existing PV systems where feasible, and the installation of an additional 300 kW of PV panels and accompanying battery storage (diesel will only be required as back-up) on the existing mini-grid infrastructure. Training will be provided to 3 technical staff on the island and an additional 5 staff on the mainland to act as back-up and to provide logistical support in the event of new equipment being required.

The Project Coordinator will work in collaboration with /oversee the work of the three project managers to be recruited for each of the components.

III. Functions / Key Results Expected

Summary of Key Functions:

- Strategic project planning, coordination and implementation
- Management of the Project
- Representation and Coordination
- Management of communication flow
- Partnership building and donor liaison

1. Ensures **strategic project planning, coordination and implementation**, focusing on achievement of the following results:

- Provides guidance and manages the overall implementation including planning, budgeting, implementation and monitoring.
- Ensures overall efficient coordination of programmes/projects including planning processes and timely delivery of results taking into consideration agreed upon work plans with the UNDP country office and the participating ministries/organisations
- Ensures identification and promotion of joint programming and planning opportunities
- Identifies and develops new programme and project opportunities.
- Supports capacity building of national counterparts.
- Oversees project implementation through close monitoring of results. Ensures effective application of RBM tools, management of scorecard targets and other benchmarks.
- Coordinates and follows through on decentralized local evaluations.
- Ensures full compliance with audit requirements and timely follow-up to audit recommendations.
- Promotes identification and synthesis of best practices and lessons learned for organizational sharing and learning.

2. Responsible for effective **project management** focusing on achievement of the following results:

- Ensures smooth running of the project, builds an effective project team, promotes team work and an environment that is conducive to delivering results.
- Ensures full responsibility for the appropriate use and management of resources attributed to the project by tracking use of financial resources, ensuring the integrity of financial systems and consistent application of the Internal Control Framework and/or rules and regulations. Continually find ways to systematically identify and integrate efficiency gains and cost reductions in all operations.
- Approves contracts and ATLAS transactions under written delegated authority from the Resident Representative and/or Country Director. Has Atlas manager rights as delegated. Responsible for the management of the project staff, monitors their performance, completing performance assessments where necessary.
- Ensures timely and regular reporting.
- Builds capacity of the project staff by identifying capacity needs and establishing training/learning programmes.

3. Ensures effective **management of the three components** for proper implementation as per the funding proposal achieving the following:

- Contribute to preparation and revision of project work and financial plans, as required by UNDP, and support the operational and financial planning processes;
- Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report, Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GCF and other oversight agencies;
- Contribute to the preparation and implementation of progress reports, and monitor all project activities, budgets and financial expenditures;
- Assist in the preparation of payments requests for operational expenses, salaries, insurances etc as well as follow up on timely disbursements by the UNDP CO;
- Maintain project correspondence and communication;
- Assist in logistical organisation of meetings, training and workshops;
- Prepare agendas, make necessary arrangement for the Project Board and Project meetings and other internal and external meetings related to the project and write the minutes of those meetings accordingly;
- ❑ Maintain a proper inventory of all project equipment

4. Responsible for **Representation and Coordination** in the area focusing on achievement of the following results:

- ❑ Able to represent UNDP with UNCT and development partners if needed
- ❑ Provides strong coordination support to national authorities and other organizations through the establishment of a wider consultation process.
- ❑ Ensures proper coordination and inputs to Interagency initiatives.
- ❑ Maintains collaboration and coordination with the other project managers to ensure programmatic integration and sharing of best practices.

5. Promotes **communication flow in the project** focusing on achievement of the following results:

- ❑ Maximizes communication between the various portfolios and ensures that stakeholders (development partners, bilateral and multilateral donors, private sector, civil society, UN agencies and Government agencies) have one consistent UNDP counterpart.
- ❑ Ensures internal communication and coordination at project level and effective and proactive communication between relevant project units.
- ❑ Monitors the perception of the GCF project at the local level and suggest media activities that positions the GCF project more strategically and effectively as a neutral broker for local development. Enhances local visibility for the project in development effectiveness
- ❑ Ensures that local development results are effectively communicated in collaboration with Communication Office in the country office.

6. Fosters **partnership building and donor liaison** focusing on achievement of the following results:

- ❑ Contributes to the development of the project Partnership and Resource Mobilization (PRM) strategy, including planning tools to implement the strategy.
- ❑ Identifies new partnerships and strengthens existing ones at the project level through innovative approaches to partnership development.
- ❑ Encourages ways of increasing project funding base such as engaging in resource mobilization efforts in consultation with local counterparts and following-up with donors on local opportunities.

IV. Impact of Results

The Project Coordinator is the UNDP senior representative in the project. The results of his/her work impacts on the standing and reputation of UNDP in the country and with the Green Climate Fund. When requested by the Resident Representative or Country Director, the Project Coordinator represents UNDP in international and national forums, liaises with external clients and a broad range of constituencies and UNDP counterparts in the Government, local and international media, civil society as well as counterparts from other international organizations.

V. Duration of Assignment

Project implementation is for a period of 8 years starting as soon as possible. The Project Coordinator should be available fulltime for effective implementation of project. The project manager's contract will be renewed on an annual basis subject to performance.

VI. Competencies and Critical Success Factors

Functional competencies

Advocacy/Advancing A Policy-Oriented Agenda

Influencing the public policy agenda

- Dialogues with national counterparts and other stakeholders to strengthen advocacy efforts, incorporating country, regional and global perspectives

Results-Based Project Development and Management

Achieving results through project design and innovative resourcing strategies

- Ensures the full implementation of country programme and Financial Resources to obtain results

Building Strategic Partnerships

Building strategic alliances

- Makes effective use of UNDP's resources and comparative advantage to strengthen partnerships
- Creates networks and promotes initiatives with partner organizations

Innovation and Marketing New Approaches

Fostering innovation in others

- Creates an environment that fosters innovation and innovative thinking
- Conceptualizes more effective approaches to programme development and implementation and to mobilizing and using resources

Resource Mobilization (Field Duty Stations)

Developing resource mobilization strategies at country level

- Contributes to the development of resource mobilization strategies at SO level
- Actively develops partnerships with potential donors and government counterparts in all sectors at country level

Promoting Organizational Learning and Knowledge Sharing

Participating in the development of policies and innovative approaches and promoting their application throughout the organization

- Promotes UNDP as a learning/knowledge sharing organization

Job Knowledge/Technical Expertise

Level 3: Expert knowledge of own discipline

- Possesses expert knowledge of advanced concepts in primary discipline, a broad knowledge of related disciplines, as well as an in-depth knowledge of relevant organizational policies and procedures
- For managers: applies a broad knowledge of best management practices; defines objectives and work flows, positions reporting relationships in such a way as to obtain optimum effectiveness for the unit/branch
- Keeps abreast of new developments in area of professional discipline and job knowledge and seeks to develop him/herself personally
- Demonstrates comprehensive knowledge of information technology and applies it in work assignments
- Demonstrates expert knowledge of the current project guidelines and project management tools and manages the use of these regularly in work assignments

Client Orientation

Meeting long-term client needs

- Anticipates constraints in the delivery of services and identifies solutions or alternatives
- Proactively identifies, develops and discusses solutions for internal and external clients, and persuades management to undertake new projects or services
- Advises and develops strategic and operational solutions with clients that add value to UNDP programmes and operations

Core Competencies:

- Promoting ethics and integrity, creating organizational precedents
- Building support and political acumen
- Building staff competence, creating an environment of creativity and innovation
- Building and promoting effective teams
- Creating and promoting enabling environment for open communication
- Creating an emotionally intelligent organization
- Leveraging conflict in the interests of UNDP & setting standards
- Sharing knowledge across the organization and building a culture of knowledge sharing and learning
- Fair and transparent decision making; calculated risk-taking

VII. Recruitment Qualifications

Education:	Master's degree in International Development, Social Sciences, Public Administration, Environment, Business Administration, or other relevant development areas.
Experience:	7 to 10 years of relevant experience (years of experience depending on the level of the post) in development in a governmental, multilateral organization in a multi-cultural setting 3 to 5 years of senior-level management responsibilities of similar size and complexities.
Language Requirements:	Strong written and spoken skills of the UN working language of the duty station i.e. English. A second UN language desirable

	namely French.
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VIII. Signatures- Job Description Certification

Incumbent *(if applicable)*

Name	Signature	Date
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Supervisor

Name	Signature	Date
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Chief Division/Section

Name	Signature	Date
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UNITED NATIONS DEVELOPMENT PROGRAMME TERMS OF REFERENCE

I. Position Information

Job Code Title: Project Assistant

Project Title: Component 2 Accelerating the transformational shift to a low carbon economy in the Republic of Mauritius

Classified Grade: SC-6 (proforma cost: 1800 USD/month)

Supervisor: Project Manager / National Project Director at the Central Electricity Board/Head of Environment Unit UNDP

II. ORGANIZATIONAL CONTEXT

The Project Background:

The Ministry of Energy and Public Utilities (MEPU) is responsible for all policies relating to investment in the renewable energy sector. The Central Electricity Board (CEB) is a parastatal entity under the purview of MEPU. CEB is responsible for the generation (in collaboration with Independent Power Producers), transmission and distribution of electricity. The CEB has requested GCF support for the implementation of Component 2 of the proposed project.

With the assistance of the GCF project, CEB will be enabled to acquire and install the equipment necessary to ensure 185 MW of intermittent renewable energy can be connected to the grid without jeopardising grid stability. In addition, GCF resources will be used to provide a grant to SSDG Phase 3 users to partially cover the upfront cost of investing in small- and medium-scale PV systems.

Augmenting these PV installations, smart meters will be installed in SSDG Phase 3 premises so as to optimally manage the generation output of the rooftop solar PV installations and thereby lay the basis for a smart grid at national scale. The results of the implementation of the smart grid will then inform CEB on

the requirements for national-scale smart grid deployment and the development of a strategy accordingly.

Organisational Context

The Project Assistant will be locally recruited based on an open competitive process. He/She will be responsible for the overall administration of the project. The Project Assistant will report to the Project Manager. Generally, the Project Assistant will be responsible for supporting the Project Manager in meeting government obligations under the project, under the national execution modality (NEX).

III. FUNCTIONS / KEY RESULTS EXPECTED

Summary of Key Functions:

1. Liaison and Project Coordination;
2. Project data collection, monitoring and evaluation, reporting;
3. Assistance to Component 2 Project Manager.

1. Liaison and Project Coordination:

- Ensure effective coordination between all the actors in the Project sub-Board, in implementation of project activities;
- Ensure collection and disseminating of information pertaining project's dynamics along the operational management Project Manager – UNDP Environment Officer and Project Director
- Establish and maintain a permanent and an efficient communication channel with head actors of the Project sub-Board ;
- Advise all project counterparts on applicable administrative procedures and ensures their proper implementation;
- Maintain project correspondence and communication;
- Receive, screen and distribute correspondence and attach necessary background information;
- Assist in logistical organization of meetings, training and workshops;
- Prepare agendas and arrange field visits, appointments and meetings both internal and external related to the project activities and write minutes from the meetings;

2. Project data collection, monitoring and evaluation, reporting:

- Continuous data collection for project's activities/interventions monitoring and evaluation;
- Prepare continuous evaluation reports and submit to the Project Manager
- Collect, register and maintain all information on project activities;
- Monitor project activities, budgets and financial expenditures;
- Support the preparations of project work-plans and operational and financial planning processes;
- Maintain project filing system;
- Follow-up on timely disbursements by UNDP CO;
- Maintain records over project equipment inventory;
- Assist in the preparation of payments requests for operational expenses, salaries, insurance, etc. against project budgets and work plans;

3. Assistance to Component 2- Project Manager:

- Perform as secretary to meetings led by the Project Manager or Environment Programme Officer

with partners and stakeholders and to monitor follow up actions on decisions taken;

- Perform any other cognate duty to be assigned by the Project Manager.
- Contribute to the preparation and implementation of progress reports;
- Assist in procurement and recruitment processes;
- Prepare routine correspondence and memoranda for Project Manager's signature;
- Perform other duties as required.

IV. Impact of Results

Accurate data entry and financial information have an impact on the quality and implementation of the UNDP Project. A client-oriented and efficient approach impact on the image of Project sub-Board in the Government.

V. Duration of Assignment

Project implementation is for a period of 8 years starting as soon as possible. The Project Assistant should be available fulltime for effective implementation of project. The project Assistant's contract will be renewed on an annual basis subject to performance.

VI. COMPETENCIES AND CRITICAL SUCCESS FACTOR

Corporate Competencies:

- Demonstrates commitment to UNDP's mission, vision and values.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability

Functional Competencies:

Knowledge Management and Learning

- Shares knowledge and experience
- Actively works towards continuing personal learning, acts on learning plan and applies newly acquired skills

Development and Operational Effectiveness

- Ability to perform a variety of standard tasks related to Results Management, including screening and collecting of projects documentation, projects data entering, preparation of revisions, filing, provision of information
- Ability to provide input to business processes re-engineering, implementation of new system, including new IT based systems

Leadership and Self-Management

- Focuses on result for the client and responds positively to feedback
- Consistently approaches work with energy and a positive, constructive attitude
- Remains calm, in control and good humored even under pressure

VII. RECRUITMENT QUALIFICATIONS

Education:	University Degree in Business or Public Administration, Economics, and Social or Environmental Sciences would be desirable, but it is not a requirement.
Experience:	<ul style="list-style-type: none"> • At least 3 years of administrative and/or financial management experience; • Demonstrable ability to administer project budgets, and track financial expenditure; • Demonstrable ability to maintain effective communications with different stakeholders, and arrange stakeholder meetings and/or workshops; • Excellent computer skills, in particular mastery of all applications of the MS Office package; • Excellent written communication skills; and
Language Requirements:	Fluency in English and French (written & spoken)

VIII. Signatures- Job Description Certification

Incumbent *(if applicable)*

Name	Signature	Date
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Supervisor

Name	Signature	Date
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Chief Division/Section

Name	Signature	Date
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UNITED NATIONS DEVELOPMENT PROGRAMME TERMS OF REFERENCE

I. Position Information

Job Code Title: Project Assistant
Project Title: Component 1 Accelerating the transformational shift to a low carbon economy in the Republic of Mauritius
Classified Grade: SC-6 (proforma cost: 1800 USD/month)
Supervisor: Project Manager / National Project Director at the Ministry of Energy and Public Utilities/Head of Environment Unit UNDP

II. ORGANIZATIONAL CONTEXT

The Project Background:

The Ministry of Energy and Public Utilities (MEPU) is responsible for all policies relating to investment in the renewable energy sector. The Central Electricity Board (CEB) is a parastatal entity under the purview of MEPU. CEB is responsible for the generation (in collaboration with Independent Power Producers), transmission and distribution of electricity. In the framework of the Long-Term Energy Strategy 2009-2025 and growing concerns at the projected increases in power that will be necessary in the near-future (implying considerably more fossil fuel imports), the Government has recently reaffirmed its intention to establish the Mauritius Renewable Energy Agency (MARENA). MARENA will initially perform a coordination and investment promotion function with regard to renewables and, in particular, renewable energy Independent Power Producers (IPPs). The MEPU has requested GCF support for the creation and operationalisation of MARENA.

The principal outcome of Component 1 will be the emergence of a strengthened institutional and regulatory system for renewable energy in Mauritius, which will directly facilitate the implementation of Component 2. By the end of Component 1 (2018), the Government will have the required legal texts,

systems and institutional capability to effectively manage the evolution and growth of the renewable energy sector. The promotion of renewable energy technologies and a better understanding of the sector from an investor’s perspective are expected to result in reduced GHG emissions through the scale-up of renewable power generation, both centralised and decentralised, at a national scale.

Organisational Context

The Project Assistant will be locally recruited based on an open competitive process. He/She will be responsible for the overall administration of the project. The Project Assistant will report to the Project Manager. Generally, the Project Assistant will be responsible for supporting the Project Manager in meeting government obligations under the project, under the national execution modality (NEX).

III. FUNCTIONS / KEY RESULTS EXPECTED

Summary of Key Functions:

4. Liaison and Project Coordination;
5. Project data collection, monitoring and evaluation, reporting;
6. Assistance to Component 1 Project Manager.

3. Liaison and Project Coordination:

- Ensure effective coordination between all the actors in the Project sub-Board, in implementation of project activities;
- Ensure collection and disseminating of information pertaining project’s dynamics along the operational management Project Manager – UNDP Environment Officer and Project Director
- Establish and maintain a permanent and an efficient communication channel with head actors of the Project sub-Board ;
- Advise all project counterparts on applicable administrative procedures and ensures their proper implementation;
- Maintain project correspondence and communication;
- Receive, screen and distribute correspondence and attach necessary background information;
- Assist in logistical organization of meetings, training and workshops;
- Prepare agendas and arrange field visits, appointments and meetings both internal and external related to the project activities and write minutes from the meetings;

4. Project data collection, monitoring and evaluation, reporting:

- Continuous data collection for project’s activities/interventions monitoring and evaluation;
- Prepare continuous evaluation reports and submit to the Project Manager
- Collect, register and maintain all information on project activities;
- Monitor project activities, budgets and financial expenditures;
- Support the preparations of project work-plans and operational and financial planning processes;
- Maintain project filing system;
- Follow-up on timely disbursements by UNDP CO;
- Maintain records over project equipment inventory;
- Assist in the preparation of payments requests for operational expenses, salaries, insurance, etc. against project budgets and work plans;

3. Assistance to Component 1- Project Manager:

- Perform as secretary to meetings led by the Project Manager or Environment Programme Officer with partners and stakeholders and to monitor follow up actions on decisions taken;
- Perform any other cognate duty to be assigned by the Project Manager.
- Contribute to the preparation and implementation of progress reports;
- Assist in procurement and recruitment processes;
- Prepare routine correspondence and memoranda for Project Manager's signature;
- Perform other duties as required.

IV. Impact of Results

Accurate data entry and financial information have an impact on the quality and implementation of the UNDP Project. A client-oriented and efficient approach impact on the image of Project sub-Board in the Government.

V. Duration of Assignment

Project implementation is for a period of 3 years starting as soon as possible. The Project Assistant should be available fulltime for effective implementation of project. The project Assistant's contract will be renewed on an annual basis subject to performance.

VI. COMPETENCIES AND CRITICAL SUCCESS FACTORS

Corporate Competencies:

- Demonstrates commitment to UNDP's mission, vision and values.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability

Functional Competencies:

Knowledge Management and Learning

- Shares knowledge and experience
- Actively works towards continuing personal learning, acts on learning plan and applies newly acquired skills

Development and Operational Effectiveness

- Ability to perform a variety of standard tasks related to Results Management, including screening and collecting of projects documentation, projects data entering, preparation of revisions, filing, provision of information
- Ability to provide input to business processes re-engineering, implementation of new system, including new IT based systems

Leadership and Self-Management

- Focuses on result for the client and responds positively to feedback
- Consistently approaches work with energy and a positive, constructive attitude
- Remains calm, in control and good humored even under pressure

VII. RECRUITMENT QUALIFICATIONS

Education:	University Degree in Business or Public Administration, Economics, and Social or Environmental Sciences would be desirable, but it is not a requirement.
Experience:	<ul style="list-style-type: none"> • At least 3 years of administrative and/or financial management experience; • Demonstrable ability to administer project budgets, and track financial expenditure; • Demonstrable ability to maintain effective communications with different stakeholders, and arrange stakeholder meetings and/or workshops; • Excellent computer skills, in particular mastery of all applications of the MS Office package; • Excellent written communication skills; and
Language Requirements:	Fluency in English and French (written & spoken)

VIII. Signatures- Job Description Certification

Incumbent (if applicable)

Name	Signature	Date
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Supervisor

Name	Signature	Date
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Chief Division/Section

Name	Signature	Date
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UNITED NATIONS DEVELOPMENT PROGRAMME JOB DESCRIPTION

I. Position Information

Job Title: **Project Manager – Component 3**
Project Title: 'Accelerating the transformational change to a low carbon economy in the Republic of Mauritius'
Classified Grade: Band 5/ SC 10 (proforma cost – USD 3300/month)
Supervisor: National Project Director at the Ministry of Ocean Economy/Head of Environment Unit UNDP/Project sub-Board

II. Background

The Project Manager (PM), will be recruited based on an open competitive process. He/She will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The PM will report to the National Project Director at the Ministry of Ocean Economy/Head of Environment Unit UNDP/Project sub-Board, in close consultation with the host institution for all of the project's substantive and administrative issues. From the strategic point of view of the project, the PM will report on a periodic basis to the Project sub-Board. Generally, the PM will be responsible for meeting government obligations under the project, under the national execution modality (NEX). He/She will perform a liaison role with the Government, UNDP and other UN Agencies, NGOs and project partners, and maintain close collaboration with other funding agencies providing co-financing.

The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Mauritius signed in 1974 and the Country Programme Document (CPD). The Ministry of

Finance and Economic Development (MOFED) being the National Designated Authority, will oversee the project execution and ensure that it is implemented in accordance with the applicable national policies.

The Implementing Partner in UNDP terminology – the Executing Entity in GCF terminology – is the entity responsible and accountable for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP/GCF resources.

III. THE PROJECT

The Ministry of Ocean Economy (MOE) is the parent Ministry for the Outer Islands Development Corporation. The OI DC is responsible for the management of the Outer Islands of Agalega. The Ministry of Ocean Economy has requested GCF support for the implementation of Component 3 of the proposed project.

The principal goal of Component 3 will be to transform Agalega into the first low-emission inhabited island in the Republic of Mauritius. Approximately 300 inhabitants will benefit from this development, which will involve rehabilitation of the existing PV systems where feasible, and the installation of an additional 300 kW of PV panels and accompanying battery storage (diesel will only be required as back-up) on the existing mini-grid infrastructure. Training will be provided to 3 technical staff on the island and an additional 5 staff on the mainland to act as back-up and to provide logistical support in the event of new equipment being required.

IV. PROJECT SUB-BOARD

The Project Board will be composed of high level representatives of the key organisations related to the activities of component 3 namely Ministry of Ocean Economy, Ministry of Energy and Public Utilities and the CEB. It will provide high-level policy guidance and orientation to the project. The Project Director, from the MOE, will sit on the Project sub-Board as chairperson. In addition, representatives from the following organizations/entities will form part of the Project sub-Board:

- a. Ministry of Finance and Economic Development;
- b. Ministry of Ocean Economy
- c. Ministry of Energy and Public Utilities
- d. Central Electricity Board
- e. University of Mauritius
- f. University of Technology, Mauritius
- g. Mauritius Research Council
- h. Joint Economic Council
- i. United Nations Development Programme
- j. Private sector
- k. NGOs

The principal tasks of the Project Board are the following:

1. Provide high level orientation and guidance for the project.
2. Ensure that the project develops in accordance with national development objectives, goals and policies.
3. Pay special attention to the assumptions and risks identified in the log frame, and seek measures to minimize these threats to project success;
4. Ensure collaboration between institutions and free access on the part of project actors to key documents, land information systems, remote sensing imagery, etc.
5. Pay special attention to the post-project sustainability of activities developed by the

project.

6. Ensure the integration and coordination of project activities with other related government and donor-funded initiatives.

V. Impact of Results

The Key results impact on successful implementation of the project's Strategic Results Framework. Effective Strategic Results Framework implementation and achievement of project outputs and results as outlined in the project document will be appraised by the members of the project sub-Board.

VI. Duration of Assignment

Project implementation is for a period of 2 years starting as soon as possible. The PM should be available fulltime for effective implementation of project. The project manager's contract will be renewed on an annual basis subject to performance.

VII. FUNCTIONS / KEY RESULTS EXPECTED

Summary of Key Functions:

1. Implementation of the Project Strategies and Objectives.
 2. Management of the Project including reporting on project results and outcomes.
 3. Coordination with the Project sub-Board and other stakeholders.
 4. Provision of top quality policy advice services to the Government and facilitation of knowledge building and management.
 5. Supervision of Project Personnel and other service providers.
-
7. Ensures **implementation of project strategies and objectives** focusing on achievement of the following results:
 - Supervise and coordinate the production of project outputs, as per the project document;
 - Mobilize all project inputs in accordance with UNDP procedures for nationally executed projects;
 - Ensure the timely and effective implementation of all components of the project through proper monitoring and evaluation of the project for timely project re-adjustment;
 - Coordinate the recruitment and selection of project personnel/service providers;
 - Scrutinise and review all the deliverables of the projects including deliverables of the various project personnel recruited under this project;
 - Carry regular, announced and unannounced inspections of all sites concerned with the project;
 8. Ensures effective **management of the Project** for proper implementation as per the Project document achieving the following:
 - Prepare and revise project work and financial plans, as required by UNDP, and support the operational and financial planning processes;
 - Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report, Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GCF and other oversight agencies;

<ul style="list-style-type: none"> • Contribute to the preparation and implementation of progress reports, and monitor all project activities, budgets and financial expenditures; • Assist in the preparation of payments requests for operational expenses, salaries, insurances etc. as well as follow up on timely disbursements by the UNDP CO; • Maintain project correspondence and communication; • Assist in logistical organisation of meetings, training and workshops; • Prepare agendas, make necessary arrangement for the Project sub-Board and project meetings and other internal and external meetings related to the project and write the minutes of those meetings accordingly; • Maintain a proper inventory of all project's equipment.
<p>9. Ensures coordination with Project sub-Board and other stakeholders focusing on achievement of the following results:</p> <ul style="list-style-type: none"> • Liaise with UNDP, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities; • Disseminate project reports and respond to queries from concerned stakeholders; • Report progress of project to the Project sub-Board Meetings, and ensure the fulfilment of Project sub-Board directives.
<p>10. Ensures provision of top quality advisory services and facilitation of knowledge building and management focusing on achievement of the following results:</p> <ul style="list-style-type: none"> • Promote knowledge management, document best practices and lessons learned from project implementation, and facilitate dissemination in appropriate format to relevant stakeholders • Ensure strategic partnership by liaising with project partners, donor organisations, NGO's and other stakeholders for effective implementation and coordination of project activities • Support liaison with key partner institutions engaged in complementary national programs and initiatives.
<p>11. Ensures through the supervision of the Project Personnel and service providers that the various components of the projects are properly being undertaken:</p> <ul style="list-style-type: none"> • Supervise and coordinate the work of all project staff, consultants and sub-contractors; • Facilitate administrative backstopping (support) to project staff, consultants and sub-contractors and to training activities supported under the project; • Advise all project counterparts on applicable administrative procedures and ensure their proper implementation; • Provide support and technical assistance to all project staff, consultants and sub-contractors as and when required through substantive analysis and inputs.

VIII. RECRUITMENT QUALIFICATIONS	
Education:	<ul style="list-style-type: none"> • A university degree (preferably a MSc or PhD) in Electrical Engineering, Energy Economics, and similar qualifications; • Post graduate qualification in management/project management and/or at least 5 years professional experience at managerial level or other acceptable qualification;
Experience:	<ul style="list-style-type: none"> • At least 5 years of experience in the energy sector; • At least 3 years of project/programme management

	<p>experience;</p> <ul style="list-style-type: none"> • Working experience with the project national stakeholder institutions and agencies is desired; • Ability to effectively coordinate a large, multi-stakeholder project; • Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project; • Strong drafting, presentation and reporting skills; • Strong computer skills; • Excellent written communication skills; and
Language Requirements:	<ul style="list-style-type: none"> • A good working knowledge of English is a requirement. A working knowledge of French is desired.

Signatures- Job Description Certification		
Incumbent Name:	Signature	Date
Supervisor Name:	Signature	Date
Head of Department Name: Roland Alcindor	Signature	Date



I. Position Information	
Job Title:	Project Manager – Component 2
Project Title:	'Accelerating the transformational change to a low carbon economy in the Republic of Mauritius
Classified Grade:	Band 5/ SC 10 (proforma cost – USD 3300/month)
Supervisor:	National Project Director at the Central Electricity Board/Head of Environment Unit UNDP/Project sub-Board

II. Background

The Project Manager (PM), will be recruited based on an open competitive process. He/She will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The PM will report to the National Project Director at the Central Electricity Board/Head of Environment Unit UNDP/Project sub-Board, in close consultation with the host institution for all of the project's substantive and administrative issues. From the strategic point of view of the project, the PM will report on a periodic basis to the Project sub-Board. Generally, the PM will be responsible for meeting government obligations under the project, under the national execution modality (NEX). He/She will perform a liaison role with the Government, UNDP and other UN Agencies, NGOs and project partners, and maintain close collaboration with other funding agencies providing co-financing.

The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Mauritius signed in 1974 and the Country Programme Document (CPD). The Ministry of Finance and Economic Development (MOFED) being the National Designated Authority, will oversee the project execution and ensure that it is implemented in accordance with the applicable national policies.

The Implementing Partner in UNDP terminology – the Executing Entity in GCF terminology – is the entity responsible and accountable for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP/GCF resources.

III. THE PROJECT

The Ministry of Energy and Public Utilities (MEPU) is responsible for all policies relating to investment in the renewable energy sector. The Central Electricity Board (CEB) is a parastatal entity under the purview of MEPU. CEB is responsible for the generation (in collaboration with Independent Power Producers), transmission and distribution of electricity. The CEB has requested GCF support for the implementation of Component 2 of the proposed project.

With the assistance of the GCF project, CEB will be enabled to acquire and install the equipment necessary to ensure 185 MW of intermittent renewable energy can be connected to the grid without jeopardising grid stability. In addition, GCF resources will be used to provide a grant to SSDG Phase 3 users to partially cover the upfront cost of investing in small- and medium-scale PV systems. Augmenting these PV installations, smart meters will be installed in SSDG Phase 3 premises so as to optimally manage the generation output of the rooftop solar PV installations and thereby lay the basis for a smart grid at national scale. The results of the implementation of the smart grid will then inform CEB on the requirements for national-scale smart grid deployment and the development of a strategy accordingly.

IV. PROJECT SUB-BOARD

The Project sub-Board will be composed of high level representatives of the key organisations related to Energy. It will provide high-level policy guidance and orientation to the project. The Project Director, from the CEB, will sit on the Project sub-Board as chairperson. In addition, representatives from the following organizations/entities will form part of the sub-Board:

- l. Ministry of Finance and Economic Development;
- m. Ministry of Energy and Public Utilities
- n. Central Electricity Board
- o. Energy Efficiency Management Office
- p. University of Mauritius
- q. University of Technology, Mauritius
- r. Mauritius Research Council
- s. Joint Economic Council
- t. United Nations Development Programme
- u. Private sector
- v. NGOs

The principal tasks of the Project sub-Board are the following:

7. Provide high level orientation and guidance for the project.
8. Ensure that the project develops in accordance with national development objectives, goals and policies.
9. Pay special attention to the assumptions and risks identified in the log frame, and seek measures to minimize these threats to project success;
10. Ensure collaboration between institutions and free access on the part of project actors to key documents, land information systems, remote sensing imagery, etc.
11. Pay special attention to the post-project sustainability of activities developed by the project.
12. Ensure the integration and coordination of project activities with other related government and donor-funded initiatives.

V. Impact of Results

The Key results impact on successful implementation of the project's Strategic Results Framework. Effective Strategic Results Framework implementation and achievement of project outputs and results as outlined in the project document will be appraised by the members of the project's Board.

VI. Duration of Assignment

Project implementation is for a period of 8 years starting as soon as possible. The PM should be available fulltime for effective implementation of project. The project manager's contract will be renewed on an annual basis subject to performance.

VII. FUNCTIONS / KEY RESULTS EXPECTED

Summary of Key Functions:

6. Implementation of the Project Strategies and Objectives.
7. Management of the Project including reporting on project results and outcomes.
8. Coordination with the Project sub-Board and other stakeholders.
9. Provision of top quality policy advice services to the Government and facilitation of knowledge building and management.
10. Supervision of Project Personnel and other service providers.

Ensures **implementation of project strategies and objectives** focusing on achievement of the following results:

- Supervise and coordinate the production of project outputs, as per the project document;
- Mobilize all project inputs in accordance with UNDP procedures for nationally executed

projects;

- Ensure the timely and effective implementation of all components of the project through proper monitoring and evaluation of the project for timely project re-adjustment;
- Coordinate the recruitment and selection of project personnel/service providers;
- Scrutinise and review all the deliverables of the projects including deliverables of the various project personnel recruited under this project;
- Carry regular, announced and unannounced inspections of all sites concerned with the project;

12. Ensures effective **management of the Project** for proper implementation as per the Project document achieving the following:

- Prepare and revise project work and financial plans, as required by UNDP, and support the operational and financial planning processes;
- Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report, Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GCF and other oversight agencies;
- Contribute to the preparation and implementation of progress reports, and monitor all project activities, budgets and financial expenditures;
- Assist in the preparation of payments requests for operational expenses, salaries, insurances etc. as well as follow up on timely disbursements by the UNDP CO;
- Maintain project correspondence and communication;
- Assist in logistical organisation of meetings, training and workshops;
- Prepare agendas, make necessary arrangement for the Project sub-Board and Project meetings and other internal and external meetings related to the project and write the minutes of those meetings accordingly;
- Maintain a proper inventory of all project's equipment.

13. Ensures coordination with **Project sub-Board and other stakeholders** focusing on achievement of the following results:

- Liaise with UNDP, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities;
- Disseminate project reports and respond to queries from concerned stakeholders;
- Report progress of project to the Project sub-Board Meetings, and ensure the fulfilment of Project sub-Board directives.

14. Ensures **provision of top quality advisory services and facilitation of knowledge building and management** focusing on achievement of the following results:

- Promote knowledge management, document best practices and lessons learned from project implementation, and facilitate dissemination in appropriate format to relevant stakeholders
- Ensure strategic partnership by liaising with project partners, donor organisations, NGO's and other stakeholders for effective implementation and coordination of project activities
- Support liaison with key partner institutions engaged in complementary national programs and initiatives.

15. Ensures through the **supervision of the Project Personnel and service providers** that the various components of the projects are properly being undertaken:

- Supervise and coordinate the work of all project staff, consultants and sub-contractors;
- Facilitate administrative backstopping (support) to project staff, consultants and sub-contractors and to training activities supported under the project;
- Advise all project counterparts on applicable administrative procedures and ensure their proper implementation;

- Provide support and technical assistance to all project staff, consultants and sub-contractors as and when required through substantive analysis and inputs.

VIII. RECRUITMENT QUALIFICATIONS

Education:	<ul style="list-style-type: none"> • A university degree (preferably a MSc or PhD) in Electrical Engineering, Energy Economics, and similar qualifications; • Post graduate qualification in management/project management and/or at least 5 years professional experience at managerial level or other qualification acceptable to the board;
Experience:	<ul style="list-style-type: none"> • At least 5 years of experience in the energy sector; • At least 3 years of project/programme management experience; • Working experience with the project national stakeholder institutions and agencies is desired; • Ability to effectively coordinate a large, multi-stakeholder project; • Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project; • Strong drafting, presentation and reporting skills; • Strong computer skills; • Excellent written communication skills; and
Language Requirements:	<ul style="list-style-type: none"> • A good working knowledge of English is a requirement. A working knowledge of French is desired.

IX. Signatures- Job Description Certification

Incumbent Name:	Signature	Date
Supervisor Name:	Signature	Date
Head of Department Name: Roland Alcindor	Signature	Date



UNITED NATIONS DEVELOPMENT PROGRAMME JOB DESCRIPTION

I. Position Information

Job Title:	Project Manager – Component 1
Project Title:	'Accelerating the transformational change to a low carbon economy in the Republic of Mauritius
Classified Grade:	Band 5/ SC 10 (proforma cost – USD 3300/month)
Supervisor:	National Project Director at the Ministry of Energy and Public Utilities/Head of Environment Unit UNDP/Project sub-Board

II. Background

The Project Manager (PM), will be recruited based on an open competitive process. He/She will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The PM will report to the National Project Director/Head of Environment Unit/Project Board, in close consultation with the host institution for all of the project's substantive and administrative issues. From the strategic point of view of the project, the PM will report on a periodic basis to the Project Board. Generally, the PM will be responsible for meeting government obligations under the project, under the national execution modality (NEX). He/She will perform a liaison role with the Government, UNDP and other UN Agencies, NGOs and project partners, and maintain close collaboration with other funding agencies providing co-financing.

The project will be implemented following UNDP's National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Mauritius signed in 1974 and the Country Programme Document (CPD). The Ministry of Finance and Economic Development (MOFED) being the National Designated Authority, will oversee the project execution and ensure that it is implemented in accordance with the applicable national policies.

The Implementing Partner in UNDP terminology – the Executing Entity in GCF terminology – is the entity responsible and accountable for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP/GCF resources.

III. THE PROJECT

The Ministry of Energy and Public Utilities (MEPU) is responsible for all policies relating to investment in the renewable energy sector. The Central Electricity Board (CEB) is a parastatal entity under the purview of MEPU. CEB is responsible for the generation (in collaboration with Independent Power Producers), transmission and distribution of electricity. In the framework of the Long-Term Energy Strategy 2009-2025 and growing concerns at the projected increases in power that will be necessary in the near-future (implying considerably more fossil fuel imports), the Government has recently reaffirmed its intention to establish the Mauritius Renewable Energy Agency (MARENA). MARENA will initially perform a coordination and investment promotion function with regard to renewables and, in particular, renewable energy Independent Power Producers (IPPs). The MEPU has requested GCF support for the creation and operationalisation of MARENA.

The principal outcome of Component 1 will be the emergence of a strengthened institutional and regulatory system for renewable energy in Mauritius, which will directly facilitate the implementation of Component 2. By the end of Component 1 (2018), the Government will have the required legal texts, systems and institutional capability to effectively manage the evolution and growth of the renewable energy sector. The promotion of renewable energy technologies and a better understanding of the sector from an investor's perspective are expected to result in reduced GHG emissions through the scale-up of renewable power generation, both centralised and decentralised, at a national scale.

IV. PROJECT SUB-BOARD

The Project sub-Board will be composed of high level representatives of the key ministries related to Energy. It will provide high-level policy guidance and orientation to the project. The representative of the Ministry of Energy and Public Utilities will chair the Project sub-Board. The Project Director, also from the same ministry, will sit on the Project sub-Board. Hence, representatives from the following organizations/entities will form part of the sub-Board:

- w. Ministry of Finance and Economic Development;
- x. Ministry of Energy and Public Utilities
- y. Central Electricity Board
- z. Energy Efficiency Management Office
- aa. University of Mauritius
- bb. University of Technology, Mauritius
- cc. Mauritius Research Council
- dd. Joint Economic Council
- ee. United Nations Development Programme
- ff. Private sector
- gg. NGOs

The principal tasks of the Project sub-Board are the following:

13. Provide high level orientation and guidance for the project.
14. Ensure that the project develops in accordance with national development objectives, goals and policies.
15. Pay special attention to the assumptions and risks identified in the log frame, and seek measures to minimize these threats to project success;
16. Ensure collaboration between institutions and free access on the part of project actors to key documents, land information systems, remote sensing imagery, etc.
17. Pay special attention to the post-project sustainability of activities developed by the project.
18. Ensure the integration and coordination of project activities with other related government and donor-funded initiatives.

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V. Impact of Results
The Key results impact on successful implementation of the project's Strategic Results Framework. Effective Strategic Results Framework implementation and achievement of project outputs and results as outlined in the project document will be appraised by the members of the project sub-Board.

VI. Duration of Assignment
Project implementation is for a period of 3 years starting as soon as possible. The PM should be available fulltime for effective implementation of project. The project manager's contract will be renewed on an annual basis subject to performance.

VII. FUNCTIONS / KEY RESULTS EXPECTED
Summary of Key Functions:
<p>11. Implementation of the Project Strategies and Objectives.</p> <p>12. Management of the Project including reporting on project results and outcomes.</p> <p>13. Coordination with the Project Board and other stakeholders.</p> <p>14. Provision of top quality policy advice services to the Government and facilitation of knowledge building and management.</p> <p>15. Supervision of Project Personnel and other service providers.</p>
<p>16. Ensures implementation of project strategies and objectives focusing on achievement of the following results:</p> <ul style="list-style-type: none"> • Supervise and coordinate the production of project outputs, as per the project document; • Mobilize all project inputs in accordance with UNDP procedures for nationally executed projects; • Ensure the timely and effective implementation of all components of the project through proper monitoring and evaluation of the project for timely project re-adjustment; • Coordinate the recruitment and selection of project personnel/service providers; • Scrutinise and review all the deliverables of the projects including deliverables of the various project personnel recruited under this project; • Carry regular, announced and unannounced inspections of all sites concerned with the project;
<p>17. Ensures effective management of the Project for proper implementation as per the Project document achieving the following:</p> <ul style="list-style-type: none"> • Prepare and revise project work and financial plans, as required by UNDP, and support the operational and financial planning processes; • Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report, Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GCF and other oversight agencies; • Contribute to the preparation and implementation of progress reports, and monitor all project activities, budgets and financial expenditures; • Assist in the preparation of payments requests for operational expenses, salaries,

<p>insurances etc. as well as follow up on timely disbursements by the UNDP CO;</p> <ul style="list-style-type: none"> • Maintain project correspondence and communication; • Assist in logistical organisation of meetings, training and workshops; • Prepare agendas, make necessary arrangement for the Project sub-Board and project meetings and other internal and external meetings related to the project and write the minutes of those meetings accordingly; • Maintain a proper inventory of all project's equipment.
<p>18. Ensures coordination with Project Board and other stakeholders focusing on achievement of the following results:</p> <ul style="list-style-type: none"> • Liaise with UNDP, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities; • Disseminate project reports and respond to queries from concerned stakeholders; • Report progress of project to the Project sub-Board Meetings, and ensure the fulfilment of Project sub-Board directives.
<p>19. Ensures provision of top quality advisory services and facilitation of knowledge building and management focusing on achievement of the following results:</p> <ul style="list-style-type: none"> • Promote knowledge management, document best practices and lessons learned from project implementation, and facilitate dissemination in appropriate format to relevant stakeholders • Ensure strategic partnership by liaising with project partners, donor organisations, NGO's and other stakeholders for effective implementation and coordination of project activities • Support liaison with key partner institutions engaged in complementary national programs and initiatives.
<p>20. Ensures through the supervision of the Project Personnel and service providers that the various components of the projects are properly being undertaken:</p> <ul style="list-style-type: none"> • Supervise and coordinate the work of all project staff, consultants and sub-contractors; • Facilitate administrative backstopping (support) to project staff, consultants and sub-contractors and to training activities supported under the project; • Advise all project counterparts on applicable administrative procedures and ensure their proper implementation; • Provide support and technical assistance to all project staff, consultants and sub-contractors as and when required through substantive analysis and inputs.

VIII. RECRUITMENT QUALIFICATIONS	
Education:	<ul style="list-style-type: none"> • A university degree (preferably a MSc or PhD) in Electrical Engineering, Energy Economics, and similar qualifications; • Post graduate qualification in management/project management and/or at least 5 years professional experience at managerial level or other acceptable qualification;
Experience:	<ul style="list-style-type: none"> • At least 5 years of experience in the energy sector; • At least 3 years of project/programme management experience; • Working experience with the project national

	<p>stakeholder institutions and agencies is desired;</p> <ul style="list-style-type: none"> • Ability to effectively coordinate a large, multi-stakeholder project; • Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project; • Strong drafting, presentation and reporting skills; • Strong computer skills; • Excellent written communication skills; and
Language Requirements:	<ul style="list-style-type: none"> • A good working knowledge of English is a requirement. A working knowledge of French is desired.

Signatures- Job Description Certification		
Incumbent Name:	Signature	Date
Supervisor Name:	Signature	Date
Head of Department Name: Roland Alcindor	Signature	Date

PROJECT QA ASSESSMENT: DESIGN AND APPRAISAL					
OVERALL PROJECT					
EXEMPLARY (5) ●●●●●	HIGHLY SATISFACTORY (4) ●●●●○	SATISFACTORY (3) ●●●○○	NEEDS IMPROVEMENT (2) ●●○○○	INADEQUATE (1) ●○○○○	
At least four criteria are rated Exemplary, and all criteria are rated High or Exemplary.	All criteria are rated Satisfactory or higher, and at least four criteria are rated High or Exemplary.	At least six criteria are rated Satisfactory or higher, and only one may be rated Needs Improvement. The SES criterion must be rated Satisfactory or above.	At least three criteria are rated Satisfactory or higher, and only four criteria may be rated Needs Improvement.	One or more criteria are rated Inadequate, or five or more criteria are rated Needs Improvement.	
DECISION					
<ul style="list-style-type: none"> • APPROVE – the project is of sufficient quality to continue as planned. Any management actions must be addressed in a timely manner. • APPROVE WITH QUALIFICATIONS – the project has issues that must be addressed before the project document can be approved. Any management actions must be addressed in a timely manner. • DISAPPROVE – the project has significant issues that should prevent the project from being approved as drafted. 					
RATING CRITERIA					
STRATEGIC					
1. Does the project's Theory of Change specify how it will contribute to higher level change? (Select the option from 1-3 that best reflects the project): <ul style="list-style-type: none"> • 3: The project has a theory of change with explicit assumptions and clear change pathway describing how the project will contribute to outcome level change as specified in the programme/CPD, backed by credible evidence of what works effectively in this context. The project document clearly describes why the project's strategy is the best approach at this point in time. • 2: The project has a theory of change. It has an explicit change pathway that explains how the project intends to contribute to outcome-level change and why the project strategy is the best approach at this point in time, but is backed by limited evidence. • 1: The project does not have a theory of change, but the project document may describe in generic terms how the project will contribute to development results, without specifying the key assumptions. It does not make an explicit link to the programme/CPD's theory of change. <p><i>*Note: Management Action or strong management justification must be given for a score of 1</i></p>				3	2
				1	Evidence
				See relevant section in the project document	
2. Is the project aligned with the thematic focus of the UNDP Strategic Plan? (select the option from 1-3 that best reflects the project): <ul style="list-style-type: none"> • 3: The project responds to one of the three areas of development work⁷⁹ as specified in the Strategic Plan; it addresses at least one of the proposed new and emerging areas⁸⁰; an issues-based analysis has been incorporated into the project design; and the project's RRF includes all the relevant SP output indicators. <i>(all must be true to select this option)</i> • 2: The project responds to one of the three areas of development work¹ as specified in the Strategic Plan. The project's RRF includes at least one SP output indicator, if relevant. <i>(both must be true to select this option)</i> • 1: While the project may respond to one of the three areas of development work¹ as specified in the Strategic Plan, it is based on a sectoral approach without addressing the complexity of the development issue. None of the relevant SP indicators are included in the RRF. This answer is also selected if the project does not respond to any of the three areas of development work in the Strategic Plan. 				3	2
				1	Evidence
				See Logical Framework of the project document	

⁷⁹ 1. Sustainable development pathways; 2. Inclusive and effective democratic governance; 3. Resilience building

⁸⁰ sustainable production technologies, access to modern energy services and energy efficiency, natural resources management, extractive industries, urbanization, citizen security, social protection, and risk management for resilience

RELEVANT		
<p>3. Does the project have strategies to effectively identify, engage and ensure the meaningful participation of targeted groups/geographic areas with a priority focus on the excluded and marginalized? (select the option from 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> 3: The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. Beneficiaries will be identified through a rigorous process based on evidence (if applicable.)The project has an explicit strategy to identify, engage and ensure the meaningful participation of specified target groups/geographic areas throughout the project, including through monitoring and decision-making (such as representation on the project board) (<i>all must be true to select this option</i>) 2: The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. The project document states how beneficiaries will be identified, engaged and how meaningful participation will be ensured throughout the project. (<i>both must be true to select this option</i>) 1: The target groups/geographic areas are not specified, or do not prioritize excluded and/or marginalised populations. The project does not have a written strategy to identify or engage or ensure the meaningful participation of the target groups/geographic areas throughout the project. <p><i>*Note: Management Action must be taken for a score of 1</i></p>	3	2
	1	
	The project has a dedicated call for proposals for lower income household and also a gender action plan	
<p>4. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? (select the option from 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> 3: Knowledge and lessons learned (gained e.g. through peer assist sessions) backed by credible evidence from evaluation, corporate policies/strategies, and monitoring have been explicitly used, with appropriate referencing, to develop the project’s theory of change and justify the approach used by the project over alternatives. 2: The project design mentions knowledge and lessons learned backed by evidence/sources, which inform the project’s theory of change but have not been used/are not sufficient to justify the approach selected over alternatives. 1: There is only scant or no mention of knowledge and lessons learned informing the project design. Any references that are made are not backed by evidence. <p><i>*Note: Management Action or strong management justification must be given for a score of 1</i></p>	3	2
	1	
	The mid term evaluation of the GEF PV project informed project design	
<p>5. Does the project use gender analysis in the project design and does the project respond to this gender analysis with concrete measures to address gender inequities and empower women? (select the option from 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> 3: A <u>participatory</u> gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men, and it is fully integrated into the project document. The project establishes concrete priorities to address gender inequalities in its strategy. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (<i>all must be true to select this option</i>) 2: A gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men. Gender concerns are integrated in the development challenge and strategy sections of the project document. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (<i>all must be true to select this option</i>) 1: The project design may or may not mention information and/or data on the differential impact of the project’s development situation on gender relations, women and men, but the constraints have not been clearly identified and interventions have not been considered. <p><i>*Note: Management Action or strong management justification must be given for a score of 1</i></p>	3	2
	1	
	A gender analysis was conducted and a gender action plan is available	
<p>6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national partners, other development partners, and other actors? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> 3: An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project. It is clear how results achieved by relevant partners will contribute to outcome level change complementing the project’s intended results. If relevant, options for south-south and triangular cooperation have been considered, as appropriate. (<i>all must be true to select this option</i>) 2: Some analysis has been conducted on the role of other partners where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labour between UNDP and partners through the project. Options for south-south and triangular cooperation may not have not been fully developed during project design, even if relevant opportunities have been identified. 	3	2
	1	
	UNDP is the implementing partner in this project. The executing entities	

<ul style="list-style-type: none"> • 1: No clear analysis has been conducted on the role of other partners in the area that the project intends to work, and relatively limited evidence supports the proposed engagement of UNDP and partners through the project. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance. <p>*Note: Management Action or strong management justification must be given for a score of 1</p>	are the Ministries as this is a NM project.					
SOCIAL & ENVIRONMENTAL STANDARDS						
<p>7. Does the project seek to further the realization of human rights using a human rights based approach? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> • 3: Credible evidence that the project aims to further the realization of human rights, upholding the relevant international and national laws and standards in the area of the project. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. (<i>all must be true to select this option</i>) • 2: Some evidence that the project aims to further the realization of human rights. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget. • 1: No evidence that the project aims to further the realization of human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered. <p>*Note: Management action or strong management justification must be given for a score of 1</p>	<table border="1"> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> </tr> <tr> <td colspan="2" style="text-align: center;">1</td> </tr> </table>	3	2	1		<p style="text-align: center;">The project looks into the capacity building of the duty bearers and also of the rights holders as per the SESP conducted</p>
3	2					
1						
<p>8. Did the project consider potential environmental opportunities and adverse impacts, applying a precautionary approach? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> • 3: Credible evidence that opportunities to enhance environmental sustainability and integrate poverty-environment linkages were fully considered as relevant, and integrated in project strategy and design. Credible evidence that potential adverse environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. (<i>all must be true to select this option</i>). • 2: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Credible evidence that potential adverse environmental impacts have been identified and assessed, if relevant, and appropriate management and mitigation measures incorporated into project design and budget. • 1: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Limited or no evidence that potential adverse environmental impacts were adequately considered. <p>*Note: Management action or strong management justification must be given for a score of 1</p>	<table border="1"> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> </tr> <tr> <td colspan="2" style="text-align: center;">1</td> </tr> </table>	3	2	1		<p style="text-align: center;">An Environmental and Social Management plan was prepared for the GCF</p>
3	2					
1						
<p>9. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? The SESP is not required for projects in which UNDP is Administrative Agent only and/or projects comprised solely of reports, coordination of events, trainings, workshops, meetings, conferences and/or communication materials and information dissemination. [if yes, upload the completed checklist. If SESP is not required, provide the reason for the exemption in the evidence section.]</p>	<table border="1"> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> </table>	Yes	No			
Yes	No					
MANAGEMENT & MONITORING						
<p>10. Does the project have a strong results framework? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> • 3: The project's selection of outputs and activities are at an appropriate level and relate in a clear way to the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators that measure all of the key expected changes identified in the theory of change, each with credible data sources, and populated baselines and targets, including gender sensitive, sex-disaggregated indicators where appropriate. (<i>all must be true to select this option</i>) • 2: The project's selection of outputs and activities are at an appropriate level, but may not cover all aspects of the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of gender sensitive, sex-disaggregated indicators, as appropriate. (<i>all must be true to select this option</i>) 	<table border="1"> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> </tr> <tr> <td colspan="2" style="text-align: center;">1</td> </tr> </table>	3	2	1		<p style="text-align: center;">See Section H of the Funding Proposal</p>
3	2					
1						

<ul style="list-style-type: none"> <p>1: The results framework does not meet all of the conditions specified in selection “2” above. This includes: the project’s selection of outputs and activities are not at an appropriate level and do not relate in a clear way to the project’s theory of change; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change, and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators.</p> <p>*Note: Management Action or strong management justification must be given for a score of 1</p>		
<p>11. Is there a comprehensive and costed M&E plan in place with specified data collection sources and methods to support evidence-based management, monitoring and evaluation of the project?</p>	Yes (3)	No (1)
<p>12. Is the project’s governance mechanism clearly defined in the project document, including planned composition of the project board? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> <p>3: The project’s governance mechanism is fully defined in the project composition. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. <i>(all must be true to select this option)</i>.</p> <p>2: The project’s governance mechanism is defined in the project document; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The prodoc lists the most important responsibilities of the project board, project director/manager and quality assurance roles. <i>(all must be true to select this option)</i></p> <p>1: The project’s governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided.</p> <p>*Note: Management Action or strong management justification must be given for a score of 1</p>	3	2
1		
See Project Document		
<p>13. Have the project risks been identified with clear plans stated to manage and mitigate each risks? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> <p>3: Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis. Clear and complete plan in place to manage and mitigate each risk. <i>(both must be true to select this option)</i></p> <p>2: Project risks related to the achievement of results identified in the initial project risk log with mitigation measures identified for each risk.</p> <p>1: Some risks may be identified in the initial project risk log, but no evidence of analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and no initial risk log is included with the project document.</p> <p>*Note: Management Action must be taken for a score of 1</p>	3	2
1		
See Funding proposal which contains dedicated section on Risk Management		
EFFICIENT		
<p>14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners.</p>	Yes (3)	No (1)
<p>15. Are explicit plans in place to ensure the project links up with other relevant on-going projects and initiatives, whether led by UNDP, national or other partners, to achieve more efficient results (including, for example, through sharing resources or coordinating delivery?)</p>	Yes (3)	No (1)
<p>16. Is the budget justified and supported with valid estimates?</p>	3	2
1		

<ul style="list-style-type: none"> • 3: The project’s budget is at the activity level with funding sources, and is specified for the duration of the project period in a multi-year budget. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget. • 2: The project’s budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget. Costs are supported with valid estimates based on prevailing rates. • 1: The project’s budget is not specified at the activity level, and/or may not be captured in a multi-year budget. 	Project costs are based on actual cost estimates from the GEF PV project	
<p>17. Is the Country Office fully recovering the costs involved with project implementation?</p> <ul style="list-style-type: none"> • 3: The budget fully covers all project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.) • 2: The budget covers significant project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant. • 1: The budget does not adequately cover project costs that are attributable to the project, and UNDP is cross-subsidizing the project. <p>*Note: Management Action must be given for a score of 1. The budget must be revised to fully reflect the costs of implementation before the project commences.</p>	3	2
EFFECTIVE		
<p>18. Is the chosen implementation modality most appropriate? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> • 3: The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted, and there is evidence that options for implementation modalities have been thoroughly considered. There is a strong justification for choosing the selected modality, based on the development context. <i>(both must be true to select this option)</i> • 2: The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted and the implementation modality chosen is consistent with the results of the assessments. • 1: The required assessments have not been conducted, but there may be evidence that options for implementation modalities have been considered. <p>*Note: Management Action or strong management justification must be given for a score of 1</p>	3	2
<p>19. Have targeted groups, prioritizing marginalized and excluded populations that will be affected by the project, been engaged in the design of the project in a way that addresses any underlying causes of exclusion and discrimination?</p> <ul style="list-style-type: none"> • 3: Credible evidence that all targeted groups, prioritising marginalized and excluded populations that will be involved in or affected by the project, have been actively engaged in the design of the project. Their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change which seeks to address any underlying causes of exclusion and discrimination and the selection of project interventions. • 2: Some evidence that key targeted groups, prioritising marginalized and excluded populations that will be involved in the project, have been engaged in the design of the project. Some evidence that their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change and the selection of project interventions. • 1: No evidence of engagement with marginalized and excluded populations that will be involved in the project during project design. No evidence that the views, rights and constraints of populations have been incorporated into the project. 	3	2
<p>20. Does the project conduct regular monitoring activities, have explicit plans for evaluation, and include other lesson learning (e.g. through After Action Reviews or Lessons Learned Workshops), timed to inform course corrections if needed during project implementation?</p>	Yes (3)	No (1)
<p>21. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum.</p> <p>*Note: Management Action or strong management justification must be given for a score of “no”</p>	Yes (3)	No (1)
<p>22. Is there a realistic multi-year work plan and budget to ensure outputs are delivered on time and within allotted</p>	3	2
1		

<p>resources? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> • 3: The project has a realistic work plan & budget covering the duration of the project <i>at the activity</i> level to ensure outputs are delivered on time and within the allotted resources. • 2: The project has a work plan & budget covering the duration of the project at the output level. • 1: The project does not yet have a work plan & budget covering the duration of the project. 	<p>See Annex 10 to Funding proposal</p>	
<p>SUSTAINABILITY & NATIONAL OWNERSHIP</p>		
<p>23. Have national partners led, or proactively engaged in, the design of the project? (select from options 1-3 that best reflects this project):</p> <ul style="list-style-type: none"> • 3: National partners have full ownership of the project and led the process of the development of the project jointly with UNDP. • 2: The project has been developed by UNDP in close consultation with national partners. • 1: The project has been developed by UNDP with limited or no engagement with national partners. 	<p>3</p>	<p>2</p>
<p>24. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? (select from options 0-4 that best reflects this project):</p> <ul style="list-style-type: none"> • 3: The project has a comprehensive strategy for strengthening specific capacities of national institutions based on a systematic and detailed capacity assessment that has been completed. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly. • 2.5: A capacity assessment has been completed. The project document has identified activities that will be undertaken to strengthen capacity of national institutions, but these activities are not part of a comprehensive strategy to monitor and strengthen national capacities. • 2: A capacity assessment is planned after the start of the project. There are plans to develop a strategy to strengthen specific capacities of national institutions based on the results of the capacity assessment. • 1.5: There is mention in the project document of capacities of national institutions to be strengthened through the project, but no capacity assessments or specific strategy development are planned. • 1: Capacity assessments have not been carried out and are not foreseen. There is no strategy for strengthening specific capacities of national institutions. 	<p>3</p>	<p>2.5</p>
<p>25. Is there is a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.,) to the extent possible?</p>	<p>Yes (3)</p>	<p>No (1)</p>
<p>26. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation strategy)?</p>	<p>Yes (3)</p>	<p>No (1)</p>

Annex 15: UNDP RISK LOG

To be entered into Atlas by UNDP Country Office

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
1	Delay in procurement of necessary technical assistance for the various components.	Dec 2016	Environmental Financial Technical and Operational Organizational Political Regulatory Strategic Other	I = 1 (low) P = 3 (medium)	The UNDP Country Office will put its procurement processes at the disposal of the Government of Mauritius. Under the National Implementation Modality, UNDP may undertake procurement for Government based on a Letter of Agreement and UNDP's Cost Recovery Policy. In general, UNDP procurement timelines are shorter than Government procurement schedules.	<i>Project Coordinator</i>			
2	Duty-bearers may not have the capacity to meet their obligations to the project.	Dec 2016	Social and Environmental	I = 1 (low) P = 3 (medium)	Project elements will include: (i) the establishment of the Mauritius Renewable Energy Agency, which will be responsible for promoting and facilitating the expansion of the RE sector; (ii) development of additional relevant legislation, and (iii) training to Government and the private sector (notably SMEs) on solar PV. These elements are expected to increase stakeholders' capacities.	MARENA, Project Coordinator			

⁸¹ Impact (I) and probability (P) assessed on a scale from 1 (low) to 5 (high)

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
					Capacity building will take place for the Mauritius Renewable Energy Agency, thereby empowering it to meet its responsibilities fully.				
3	Potential for the project to reproduce discrimination against women's participation.	Dec 2016	Social and Environmental	I = 3 (medium) P = 1 (low)	Gender-disaggregated data will be used for monitoring outputs, outcomes and impacts during project implementation to ensure women's participation in capacity building and employment opportunities. Capacity-building elements incorporated in the project design that will have female participation are: (i) Component 1 will ensure gender balance (as appropriate) in the recruitment of Mauritius Renewable Energy Agency staff as well as in the dedicated training on project development; (ii) Component 2 will offer training to the private sector (with a particular focus on SMEs) in the installation, operation and maintenance of PV systems; and (iii) Component 3	Project Coordinator			

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
					will offer gender-sensitive training on the use of renewable energy to OI DC staff and selected inhabitants of Agalega.				
4	Vulnerability to climate change.	Dec 2016	Social and Environmental	I = 3 (medium) P = 3 (medium)	<p>Site selection will include locations with good insolation characteristics and where there are minimal hindrances to PV functioning.</p> <p>The project will consider PV modules with a higher temperature coefficient if most sites available are expected to have high temperature increases or experience significant heat waves.</p> <p>Specifically for Agalega, the project will consider taking out catastrophic or performance guarantee insurance to protect against degradation.</p> <p>Also specifically for Agalega, a maintenance plan will be devised for OI DC and its implementation monitored until the end of the project through bi-annual site visits by the Project Coordinator and the Component 3 Project Manager.</p>	Project Manager			

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
5	Vulnerability to geological hazards such as earthquakes.	Dec 2016	Social and Environmental	I = 1 (low) P = 1 (low)	Structural integrity will be a major criterion in determining the suitability of a building for a rooftop solar PV system to ensure it can support the weight of the system (including 'dead load'). Design of rooftop PV systems will incorporate applicable national structural engineering, construction and technical standards and/or international standards such as those from IEC, IEEE, ASTM, UL, etc.	Project Manager			
6	Transport, installation and decommissioning of the PV systems on rooftops may pose potential safety risks to local communities and workers.	Dec 2016	Technical and Operational	I = 3 (medium) P = 1 (low)	A safety management plan will be required from the developer / EPC contractor(s) and sub-contractor(s), and will be implemented and monitored for compliance during construction and decommissioning. Workers will have orientation and regular training on safe working at height. Personal protective equipment will be provided to workers. Clear warning / danger signs will be installed to alert local	Project Manager			

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
					communities of PV installation / decommissioning work.				
7	Potential failure of structural elements of rooftop PV systems can pose risks to communities.	Dec 2016	Technical and Operational	I = 3 (medium) P = 1 (low)	<p>Rooftop site selection criteria will include the presence of trees adjacent to the building.</p> <p>The developer / EPC contractor / sub-contractor will be required to ensure that only certified electrical contractors with experience in PV systems are allowed to install the solar units.</p> <p>Prominent warning signs will be installed at designated locations so that persons, particularly those with disabilities, are able to recognise the potential danger.</p> <p>A regular maintenance and cleaning project for the solar panels will be implemented to ensure no debris accumulates beneath the panels; trimming of nearby trees (if trees cannot be avoided) will ensure a safe distance from the panels; and inspection of wiring and cables.</p> <p>A safety management plan will be required from the</p>	Project Manager			

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
					developer / EPC contractor(s) and sub-contractor(s) and will be implemented throughout the project cycle.				
8	Generation of waste.	Dec 2016	Social and Environmental	I = 1 (low) P = 1 (medium)	Project EPC contractor(s) and sub-contractor(s) will be required to prepare and implement a waste management plan, which will include measures such as segregation at source, 3Rs, and for manufacturers to take back PV panels either at the end of their lifetimes or as they are replaced. Good housekeeping during construction will be strictly implemented. All recyclable wastes, including damaged solar panels and metal racks, will be sorted at source and properly collected for recycling while biodegradable wastes will be composted. Other solid wastes and non-compostable wastes will be collected and disposed of following the requirements of the Local Government Act 2011, and Local	Project Manager			

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
					Government Regulations 2003 and 2004. ⁸²				
9	The need for continued political support for institutional strengthening (Component 1).	Dec 2016	Political	I = 1 (low) P = 1 (low)	<p>The MARENA Bill was passed by Parliament on 29 September 2015. In addition, the NDC clearly states that the Government of Mauritius will implement renewable energy projects subject to the availability of international technical assistance and funding.</p> <p>The Minister of Energy and Public Utilities is on record in Parliament (Hansard, page 107: Annex XIIIai) as stating the importance of the GCF project to the Central Electricity Board and CEB's strategic priorities.</p> <p>The project will be executed nationally through UNDP's National Implementation Modality (NIM) and has the full support of the GCF NDA and the relevant line ministries.</p> <p>There can, therefore, be little doubt about continued political support and,</p>	Project Coordinator			

⁸² <http://localgovernment.govmu.org/English/Legislations/Pages/Local-Government-Act.aspx>

#	Description	Date Identified	Type (equivalent to GCF risk category)	Impact & Probability ⁸¹ (equivalent to GCF level of impact + probability of risk occurring)	Countermeasures / Mngt response (equivalent to GCF mitigation measures)	Owner	Submitted, updated by	Last Update	Status
					consequently, this risk is considered to be very low.				
10	Failure of private sector installers of PV systems to continue supporting and providing O&M to equipment (Components 2 and 3).	Dec 2016	Technical and Operational	I = 3 (medium) P = 1 (low)	There are currently approximately 20 suppliers of PV systems in Mauritius. A list of 18 that were operating under SSDG phases 1 and 2 is annexed (Annex XIIIan). The large number of PV private sector operators and the competitive environment in which they operate means that this risk is considered to be very low. O&M and after-sales service have not proved to be problems during SSDG phases 1, 2 and 3, and the growth in suppliers and technical expertise during phases 1, 2 and 3 is expected to reduce this risk even further in phase 4.	Project Coordinator			

Annex 16: HACT Assessment Summary

The following documentation is a summary of the HACT assessments conducted by Deloitte for the project. Full details can be found on the gefpims database by clicking [here](#).



Micro Assessment – Summary of Risk Assessments of the Implementing Partners



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Overall Risk Assessment											
Section	Ministry of Finance and Economic Development	Ministry of Energy and Public Utilities	Central Electricity Board	Ministry of Public Infrastructure and Land Transport	National Transport Authority	Outer Islands Development Corporation	Mauritius Oceanography Institute	Ministry of Ocean Economy, Marine Resources, Fisheries, Shipping and Outer Island	Ministry of Environment and Sustainable Development and Disaster and Beach Management	Ministry of Agro Industry, Food Production and Security	Rodrigues Regional Assembly
1. Implementing Partner	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2. Funds Flow	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3. Organizational Structure and Staffing	1.0	1.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0
4. Accounting Policies and Procedures	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
5. Internal Audit	1.0	1.0	1.0	1.0	1.0	1.0	3.0	2.0	2.0	1.0	1.0
6. Financial Audit	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
7. Reporting and Monitoring	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8. Information Systems	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9. Procurement	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Overall Risk Assessment	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	4.0	4	1.0	Low Risk
2. Funds flow:	6.0	5	1.0	Low Risk
3. Organizational structure and staffing:	11.0	10	1.0	Low Risk
4. Accounting policies and procedures:	47.0	46	1.0	Low Risk
5. Internal audit:	7.0	5	1.0	Low Risk
6. Financial audit:	8.0	6	1.0	Low Risk
7. Reporting and monitoring:	8.0	8	1.0	Low Risk
8. Information systems:	5.0	5	1.0	Low Risk
9. Procurement:	36.0	34	1.0	Low Risk
Total:	132.0	123	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	4.0	4	1.0	Low risk
2. Funds flow:	5.0	4	1.0	Low risk
3. Organizational structure and staffing:	11.0	10	1.0	Low risk
4. Accounting policies and procedures:	43.0	41	1.0	Low risk
5. Internal audit:	5.0	5	1.0	Low Risk
6. Financial audit:	8.0	6	1.0	Low risk
7. Reporting and monitoring:	8.0	8	1.0	Low risk
8. Information systems:	5.0	5	1.0	Low risk
9. Procurement:	37.0	35	1.0	Low risk
Total:	126.0	118	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	6.0	5	1.0	Low Risk
2. Funds flow:	5.0	5	1.0	Low Risk
3. Organizational structure and staffing:	12.0	10	1.0	Low Risk
4. Accounting policies and procedures:	50.0	46	1.0	Low Risk
5. Internal audit:	5.0	5	1.0	Low Risk
6. Financial audit:	7.0	6	1.0	Low Risk
7. Reporting and monitoring:	8.0	8	1.0	Low Risk
8. Information systems:	5.0	5	1.0	Low Risk
9. Procurement:	36.0	34	1.0	Low Risk
Total:	134.0	124	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	3.0	3	1.0	Low risk
2. Funds flow:	7.0	7	1.0	Low risk
3. Organizational structure and staffing:	12.0	10	1.0	Low risk
4. Accounting policies and procedures:	47.0	45	1.0	Low risk
5. Internal audit:	5.0	5	1.0	Low risk
6. Financial audit:	6.0	6	1.0	Low risk
7. Reporting and monitoring:	8.0	8	1.0	Low risk
8. Information systems:	5.0	5	1.0	Low risk
9. Procurement:	36.0	34	1.0	Low risk
Total:	129.0	123.0	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	4.0	4	1.0	Low Risk
2. Funds flow:	4.0	4	1.0	Low Risk
3. Organizational structure and staffing:	12.0	10	1.0	Low Risk
4. Accounting policies and procedures:	42.0	41	1.0	Low Risk
5. Internal audit:	5.0	5	1.0	Low Risk
6. Financial audit:	6.0	6	1.0	Low Risk
7. Reporting and monitoring:	8.0	8	1.0	Low Risk
8. Information systems:	5.0	5	1.0	Low Risk
9. Procurement:	35.0	34	1.0	Low Risk
Total:	121.0	117	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

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Summary of Risks Related to the Financial Management Capacity of the Implementing Partner				
Tested subject area (see subsequent pages for details of each subject area summarized below)				
	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	5.0	4	1.0	Low Risk
2. Funds flow:	4.0	4	1.0	Low Risk
3. Organizational structure and staffing:	15.0	10	2.0	Medium Risk There is a vacancy for internal auditor Staffs are not well acquainted with UN procedures. (no specific training for HACT framework has been provided)
4. Accounting policies and procedures:	49.0	42	1.0	Low Risk
5. Internal audit:	6.0	5	1.0	Low Risk
6. Financial audit:	6.0	6	1.0	Low Risk
7. Reporting and monitoring:	10.0	8	1.0	Low Risk
8. Information systems:	7.0	5	1.0	Low Risk
9. Procurement:	35.0	32	1.0	Low Risk

Total:	137.0	116	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner				
Tested subject area (see subsequent pages for details of each subject area summarized below)				
	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	3.0	3.0	1.0	Low risk
2. Funds flow:	5.0	4.0	1.0	Low risk
3. Organizational structure and staffing:	18.0	10.0	2.0	Medium risk The Finance team is not familiar about the HACT framework of UNDP since they haven't receive any UN funding in the past. The key positions currently vacant in IP are :Director, Internal Auditor, Scientist and HR Manager No HR training manuals in place and hence no necessary trainings undertaken
4. Accounting policies and procedures:	49.0	44.0	1.0	Low risk
5. Internal audit:	15.0	5.0	3.0	Significant risk No internal audit conducted for the past years and hence no internal control framework in place however as confirmed by the

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
				IP they are planning to conduct IA audit in June 2016
6. Financial audit:	9.0	6.0	2.0	<p>Medium risk</p> <p>There is significant delay in audit of the IP by The NAO has given an unmodified audit opinion on FS of fiscal year 2012 on 19 feb 2014 and for year end 2013 on 24 Feb 2015. Also the FS for year 2014 has still not been audited.</p> <p>The audit reports available for the year ended 2012 and 2013 did not make recommendations to be implemented.</p> <p>The Management letter for the past three years were requested but could not be obtained</p>
7. Reporting and monitoring:	8.0	8.0	1.0	Low risk
8. Information systems:	5.0	5.0	1.0	Low risk
9. Procurement:	39.0	34.0	1.0	Low risk
Total:	151.0	119	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	3.0	3	1.0	Low Risk
2. Funds flow:	7.0	7	1.0	Low Risk
3. Organizational structure and staffing:	12.0	10	1.0	Low Risk
4. Accounting policies and procedures:	47.0	45	1.0	Low Risk
5. Internal audit:	10.0	5	2.0	<p>Medium Risk</p> <p>We were not able to obtain the internal audit plan as well as the internal audit report so as to evaluate whether the audits were conducted in accordance with the plan.</p> <p>No internal control reviews have been performed for the past 1.5 years as the IP is a new ministry.</p> <p>Internal Control System is centralized under the MOFED. Section VI of the FMM: Internal Audit Policy and Operations Manual elaborates on the internal control framework in place and follows a risk based approach in line with international standards (COSO framework).</p> <p>We are unable to assess the effectiveness of internal controls as the internal audit reports were not made available for review.</p>
6. Financial audit:	6.0	6	1.0	Low Risk

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
7. Reporting and monitoring:	8.0	8	1.0	Low Risk
8. Information systems:	5.0	5	1.0	Low Risk
9. Procurement:	36.0	34	1.0	Low Risk
Total:	134.0	123	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	4.0	4	1.0	Low Risk
2. Funds flow:	4.0	4	1.0	Low Risk
3. Organizational structure and staffing:	11.0	10	1.0	Low Risk
4. Accounting policies and procedures:	42.0	41	1.0	Low Risk
5. Internal audit:	10.0	5	2.0	Medium Risk: No internal Audit Reports obtained for the past 3 years
6. Financial audit:	8.0	7	1.0	Low Risk
7. Reporting and monitoring:	8.0	8	1.0	Low Risk
8. Information systems:	5.0	5	1.0	Low Risk
9. Procurement:	37.0	34	1.0	Low Risk
Total:	129.0	118	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	4.0	4	1.0	Low risk
2. Funds flow:	4.0	4	1.0	Low risk
3. Organizational structure and staffing:	12.0	10	1.0	Low risk
4. Accounting policies and procedures:	42.0	41	1.0	Low risk
5. Internal audit:	5.0	5	1.0	Low risk
6. Financial audit:	6.0	6	1.0	Low risk
7. Reporting and monitoring:	8.0	8	1.0	Low risk
8. Information systems:	5.0	5	1.0	Low risk
9. Procurement:	35.0	35	1.0	Low Risk
Total:	121.0	118	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments
1. Implementing partner:	5.0	5	1.0	Low Risk
2. Funds flow:	5.0	5	1.0	Low Risk
3. Organizational structure and staffing:	11.0	10	1.0	Low Risk
4. Accounting policies and procedures:	42.0	41	1.0	Low Risk
5. Internal audit:	5.0	5	1.0	Low Risk
6. Financial audit:	8.0	6	1.0	Low Risk
7. Reporting and monitoring:	8.0	8	1.0	Low Risk
8. Information systems:	5.0	5	1.0	Low Risk
9. Procurement:	35.0	35	1.0	Low Risk
Total:	124.0	120	1.0	Divide the total number of risk points by the total number of applicable questions in the subject matter section.

Summary of Risks Related to the Financial Management Capacity of the Implementing Partner

Tested subject area (see subsequent pages for details of each subject area summarized below)

	Total number of risk points	Total number of applicable questions	Overall risk assessment	Comments

