



REQUEST FOR CEO APPROVAL

PROJECT TYPE: Medium-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: : Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy			
Country(ies):	Mauritius	GEF Project ID: ¹	5649
GEF Agency(ies):	UNEP (select) (select)	GEF Agency Project ID:	01272
Other Executing Partner(s):	Lead EA: Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM); Co-EAs: UNEP-Denmark Technical University (UNEP-DTU)	Submission Date:	May 30, 2016
GEF Focal Area (s):	Climate Change	Project Duration(Months)	48
Name of Parent Program (if applicable):		Project Agency Fee (\$):	137,940
	<ul style="list-style-type: none"> ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/> 		

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCM-3 (select)	Favorable policy and regulatory environment created for renewable energy investments	<ul style="list-style-type: none"> • Renewable energy policy and regulation in place • Renewable energy capacity installed • Electricity and heat produced from renewable sources 	GEF TF	900,000	33,400,000
CCM-6 (select)	Adequate resources allocated to support enabling activities and capacity building related to the Convention	<ul style="list-style-type: none"> • Countries receiving GEF support for NAMAs 	GEF TF	552,000	120,000
Total project costs				1,452,000	33,520,000

B. PROJECT FRAMEWORK

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

Project Objective: To ensure a low carbon path for the Mauritius, by establishing the national capacity for formulating and prioritizing nationally appropriate mitigation actions (NAMAs), particularly those found in “MID”, and further, develop the local capability to design and implement NAMA in the energy sector

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
COMPONENT 1: Building national capacity for cross-sectoral engagement in the formulation and implementation of NAMAs	TA	1. National capability to identify, prioritize, register and monitor NAMAs developed.	1.1: Lead agency with convening power designated, and supported by a strong team involving key stakeholders established. 1.2: A national voluntary emission reduction target formulated based on National reference GHG emission baseline established for each sector 1.3: A national NAMA list constituted and submitted to the “International Registry”. 1.4: Partners for “Supported NAMAs” identified 1.5: Programmatic Sectoral NAMAs drafted 1.6: A National NAMA registry established 1.7: Approaches & methodologies for classifying and prioritizing NAMAs developed and implemented 1.8 Gender mainstreamed into this project and capacity building activities	GEF TF	350,000	70,000
COMPONENT 2: Design & Implementation of pilot NAMA in the Energy Sector	TA	2. Pilot energy sector NAMA designed and implementation started	2.1: Electricity generation sector NAMA on utility-scale wind energy analysed, designed & financed 2.2: Two utility scale Wind farm projects implemented through private sector co-financing contributing	GEF TF	800,000	33,290,000

			to GHG emissions reduction 2.3: An attractive policy, regulatory, and supportive framework developed to facilitate investment for utility-scale RE projects			
COMPONENT 3: Establishment of MRV system and national registry for NAMAs	TA	3. Establishment of MRV system and national registry for NAMAs	3.1: Institutional framework and organizational linkages for MRV, including link to in the national registry mechanism, established 3.2: MRV system, including monitoring plan covering key parameters for the electricity generation sector, designed & implemented 3.3: Local technical professionals to conduct MRV enabled 3.4 MRV technical committee specific to the energy pilot sector constituted	GEF TF	170,000	85,000
Subtotal					1,320,000	33,445,000
Project management Cost (PMC) ³				GEF TF	132,000	75,000
Total project costs					1,452,000	33,520,000

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	MoESDDBM , MEPI, CEB	In-kind	90,000
Private Sector	Suzlon Pad Green Co Ltd	Investment	15,000,000
Private Sector	Aerowatt Mauritius Ltd	Investment	18,230,000
Other Multilateral Agency (ies)	UNEP	In-kind	100,000
Others	UNEP-DTU Partnership	In-kind	100,000
Total Co-financing			33,520,000

³ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
UNEP	GEF TF	Climate Change	Mauritius	1,452,000	137,940	1,589,940
Total Grant Resources				1,452,000	137,940	1,589,940

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants			
National/Local Consultants	15,000		15,000

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

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

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF⁴

No significant changes in the project design are made compared to the approved PIF. The rationale of the project has not been changed and the outcomes achieved in the project will be the same. Some slight adjustments have been made to the outputs in order to harmonize them with the structure of the project. These adjustments are more in the nature of merging outputs to enable a more effective implementation of the project. The changes in the outputs compared to the PIF as well as the reason for changes are reflected in Table below.

Rationale for the changes made in the outputs between PIF and Final Logical Framework		
Expected Outputs in Approved PIF	Final Outputs after PPG consultation	Rationale for changes
Objective: <i>To ensure a low carbon path for the Mauritius, by establishing the national capacity for formulating and prioritizing NAMAs, particularly those found in “MID”, and further, develop the local capability to design and implement NAMA in the energy sector</i>	Objective: <i>To ensure a low carbon path for the Mauritius, by establishing the national capacity for formulating and prioritizing NAMAs, particularly those found in “MID”, and further, develop the local capability to design and implement NAMA in the energy sector</i>	No change
Outcome 1: <i>National Capability to identify, prioritize, register and monitor NAMA's</i>	Outcome 1: <i>National capability to identify, prioritize, register and monitor NAMAs developed.</i>	Editorial change, rewording.

⁴ For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

Output 1.1: Lead agency with convening power designated, and supported by a strong team involving key stakeholders established	Output 1.1: Lead agency with convening power designated, and supported by a strong team involving key stakeholders established	No change
Output 1.2: National reference GHG emission baseline established by sectors (merged with output 7)	Output 1.2: A national voluntary emission reduction target formulated based on National reference GHG emission baseline established for each sector.	This new output is a combination of output 2 and output 7 in the PIF. The two are combined as they are both linked. The baseline analysis along with the mitigation assessment in the sectors forms the basis for developing voluntary target. Therefore the two are not separate outputs but one output which will be achieved through the steps of: establishing the baseline; undertaking mitigation analysis; and developing voluntary targets.
Output 1.3: NAMA projects identified from the MID projects and activities (merged with outputs 9 and 5)	Output 1.3: A national NAMA list constituted and submitted to the "International Registry"	This PIF output subsumes in its identification of NAMA from the MID. The MID reference is dropped as the MID was withdrawn by the government (see section A.1 National strategies and plans). Further, NAMA list submission (defined as output 9 in the PIF) is the culmination of the exercise to identify NAMAs. Thus output 3 is merged with output 9 into a new output 3. Further, output 5 in PIF is also merged into this new output 3, as MAC forms the basis for identifying the NAMAs and is thus an activity in developing output 1.3
Output 1.4: Programmatic Sectoral NAMAs developed (change in number)	Output 1.5: Programmatic Sectoral NAMAs drafted	No change except the numbering of output due to merger of some outputs.
Output 1.5: A marginal abatement cost curve for the NAMAs (merged with outputs 3 and 9)	merged with output 1.3 - see comment above for 1.3	merged with output 1.3 - see comment above for 1.3
Output 1.6: Approaches & methodologies for classifying and prioritizing NAMAs (change in number and wording)	Output 1.7: Approaches & methodologies for classifying and prioritizing NAMAs developed and implemented	The words "developed and implemented" have been included in the definition of the output. Numbering changed due merger of some outputs.
Output 1.7: A national voluntary emission reduction targets formulated and integrated in the MID (merged with output 2)	merged with output 1.2 - see comment above for 1.2	merged with output 1.2 - see comment above for 1.2
Output 1.8: A National NAMA Registry (change in number and wording)	Output 1.6: A National NAMA Registry established	The word "established" has been included in the definition of the output. Numbering changed due merger of some outputs.
Output 1.9: A national NAMA list is constituted and submitted to the "International Registry" (merged with outputs 3 and 9)	merged with output 1.3 - see comment above for 1.3	merged with output 1.3 - see comment above for 1.3
Output 1.10: Partners for Supported NAMAs identified (change in number)	Output 1.4: Partners for Supported NAMAs identified	Numbering changed due merger of some outputs.
	Output 1.8 Gender mainstreamed into this project and capacity building activities	Output included to take into consideration gender
Outcome 2: <i>Pilot energy NAMA designed and implementation started</i>	Outcome 2: <i>Pilot energy NAMA designed and implementation started</i>	No change
Output 2.1: Pilot energy sector NAMA on	Output 2.1: Electricity generation sector	The word "energy" has been changed to

utility-scale wind energy analyzed designed & financed: 1.a) detailed barrier analysis conducted 1.b) techno-economic feasibility analyzed 1.c) emission targets projected 1.d) capability of private & public sector entities in designing NAMA developed 1.e) financing & investments in energy sector NAMAs mobilized (change in wordings)	NAMA on utility-scale wind energy analysed, designed & financed	"electricity". Energy has a wider scope and national stakeholders first wanted to focus on electricity generation from RE. The sub-outputs are steps in development of NAMA and its implementation, therefore the output has been retained at the chapeau level.
Output 2.2: Wind farm projects operationalized contributing to GHG emissions reduction	Output 2.2: Two utility scale Wind farm projects implemented through private sector co-financing contributing to GHG emissions reduction	Output is more specific.
Output 2.3: An attractive environment for investment for utility-scale wind energy is created: a) national strategy for implementing NAMA in the energy sector adopted b) supportive policy and legislative instruments & financial tools and incentives adopted c) institutional mechanisms to facilitate partnerships established d) Lessons learned analyzed, documented & disseminated	Output 2.3: An attractive policy, regulatory, and supportive framework developed to facilitate investment for utility-scale RE projects	The Output now includes specific reference to policy and regulation to support all renewable energies.
Outcome 3: <i>Establishment of MRV system and national registry for NAMAs</i>	Outcome 3: <i>National Capacity to MRV NAMAs strengthened and systems established</i>	The outcome was differently worded to reflect the outcome as per the outputs. No substantive change in the outcome.
Output 3.1: MRV system incorporated in the national registry mechanism (merged with output 3.2)	Output 3.1 Institutional framework and organizational linkages for MRV, including link to in the national registry mechanism, established	This new output 3.1 is a combination of output 3.1 and output 3.2 in the PIF. The two are combined as the institutional and organizational aspects are integral parts of an MRV system.
Output 3.2: Institutional and organizational linkages for MRV established (merged with output 3.1)	merged with output 3.1 - see comment above for 3.1	Merged with output 3.1 - see comment above for 3.1
Output 3.3: MRV technical committees specific to the two pilot sectors, energy & LULUCF, constituted (change in number and wording)	Output 3.4: MRV technical committee specific to the energy pilot sector constituted	The reference to LULUCF is removed, as LULUCF is no longer part of the final revised PIF.
Output 3.4: Key parameters to be monitored for the selected NAMAs selected (merged with outputs 3.5 and 3.7; number has been changed)	Output 3.2: MRV system, including monitoring plan covering key parameters for the electricity generation sector, designed & implemented	Outputs 3.4, 3.5 and 3.7 from PIF have been merged in a new output 3.3 in revised project document. Indeed Output 3.4 in the PIF is on identifying monitoring parameters and output 3.5 is designing monitoring plan based on the monitoring parameter. They are thus both part of the MRV system defined by Output 3.7 in PIF. Note that the monitoring plan proposed in new output 3.3 is not just for pilot NAMA but for whole electricity sector, thus widening the output.
Output 3.5: Monitoring plan designed & implemented for the elected NAMAs (merged with outputs 3.4 and 3.7)	merged with output 3.4 of PIF - see comment above for 3.4	Merged with output 3.4 of PIF - see comment above for 3.4

Output 3.6: National MRV guidelines & standard methodologies for selected sectors developed (change in number)	Output 3.2: see above	The numbering is changed to put the outputs in more logical structure.
Output 3.7: MRV system for selected pilot NAMAs designed & implemented (merged with outputs 3.4 and 3.5)	Merged with output 3.4 of PIF - see comment above for 3.4	Merged with output 3.4 of PIF - see comment above for 3.4
Output 3.8: Local technical professionals are fully capable and qualified to conduct MRV (change in number and wording)	Output 3.3: Local technical professionals to conduct MRV enabled.	The wording has been slightly changed but does not affect the output itself. Numbering change due to merger of outputs.

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NA NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

The concept of Nationally Appropriate Mitigation Actions or NAMAs was introduced in the Bali Action Plan in 2007. The parties to the UNFCCC called for “Enhanced national/international action on mitigation of climate change” including “Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner”. In the Cancun Agreements reached on December 11, 2010, the Parties went to differentiate between NAMAs that are domestically supported and internationally supported, specifying that both are subject to being measured, reported and verified domestically but that the latter, will be subject to international measurement, reporting and verification (MRV). The political framework for NAMAs is still under development, but it is clear that NAMAs will become a core element of the future international climate policy regime.

In 2010, the parties to the UNFCCC agreed that developing countries can apply NAMAs to reach a deviation from business-as-usual emissions in 2020. Since then numerous countries have submitted NAMAs concepts to the UNFCCC and several more detailed NAMA proposals are under development, i.e.; the compilation of information on nationally appropriate mitigation actions to be implemented by Parties not included in Annex I to the Convention. These NAMAs address transport, energy, waste, industry, buildings and agriculture and cover a variety of actions that range from sketching low carbon strategies to plans for introducing certain policies and regulations to setting up specific projects.

In Mauritius, the identification of NAMA in energy sector, which was done in the PIF stage, was based on "Maurice île Durable (MID)" - the Long Term Sustainable Development Strategy of Republic of Mauritius. However, the new government, which was elected into office in 2014, is reconsidering the MID. Nevertheless, the NAMA developed in energy, specifically wind, remains aligned with the current policy objective. Wind was identified as a priority RE source and technology in country's TNA (Technology Needs Assessments) thus, continues to be relevant for Republic of Mauritius. The Ministry of Energy and Public Utility (MEPU) is presently updating the Long term Energy Strategy (LTES) 2009-2025, and the new renewable energy and energy efficiency targets are as follows:

- Increase the share of sustainable renewable sources in electricity production by at least 35% by 2025.
- Reduce energy consumption in non-residential buildings by up to 15% by 2025 (in comparison to 2005)
- Reduce public sector buildings energy consumption on average by up to 15% by 2025 (in comparison to 2005)

The Mauritius UNDAF Country Programme Document 2013-2016 states the ff:

“Country programme/UNDAF outcome: Achieving environmental sustainability while addressing climate change and ensuring more effective environmental protection and conservation of natural resources. Related strategic

plan focus area: Environment and sustainable development. Outcome indicator: percentage of renewable energy on the national grid.”

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.

There are no changes from the PIF. The project will both support Mauritius' enabling activities required by UNFCCC, at the same time, promote investment in renewable energy by both state and private sector actors.

The project objective is to support the formulation and initial implementation of appropriate climate change mitigation actions as part of the initiatives to achieve the voluntary GHG emission reduction targets of the Republic of Mauritius. The expected outcomes from the various components of the project that will contribute to the realization of this objective are in line with the following GEF-5 climate change mitigation focal area strategic objectives:

<p>CCM-3: Renewable Energy: Promote investment in renewable energy technologies</p>	<p>Outcome 3.1: Favorable policy and regulatory environment created for renewable energy investments <i>Indicator 3.1: Extent to which RE policies and regulations are adopted and enforced (score of 1 to 5)</i> Outcome 3.2: Investment in renewable energy technologies increased <i>Indicator 3.2: Volume of investment mobilized</i></p>	<p>Output 3.1: Renewable energy policy and regulation in place Output 3.2: Renewable energy capacity installed Output 3.3: Electricity and heat produced from renewable sources</p>
<p>CCM-6: Enabling Activities: Support enabling activities and capacity building under the Convention</p>	<p>Outcome 6.1: Adequate resources allocated to support enabling activities under the Convention <i>Indicator 6.1: Percentage of eligible countries receiving GEF funding</i> Outcome 6.2: Human and institutional capacity of recipient countries strengthened <i>Indicator 6.2: Countries and institutions supported by the GEF</i></p>	<p>Output 6.1: Countries receiving GEF support for national communication, etc. Output 6.1: National communications, etc. completed and submitted to the UNFCCC as appropriate</p>

A.3 The GEF Agency’s comparative advantage:

The following is additional to the justification provided in the PIF.

Over the past 2-3 decades, UNEP has built a strong partnership with institutions in Mauritius, especially the Ministry of Environment (under its different appellations over the years). The implication of the strong institutional partnership is pivotal given the stake that the Ministry of Environment, Sustainable Development, and Disaster and Beach Management (MoESDDBM) has in climate change. For instance, the MoESDDBM will coordinate and lead the execution of the project. Further, MoESDDBM is the focal point for the UNFCCC and is responsible for the coordination of national communications (NATCOM), biennial update reports (BUR), greenhouse gas (GHG) Inventories as well as Mitigation projects. Moreover, the Director of Environment, MoESDDBM is the DNA for the CDM.

UNEP (and the UNEP-DTU Partnership (UDP) has supported Mauritius with the implementation of several climate change mitigation enabling activities, starting with the Initial National Communication (INC) then the Second National Communication (SNC) and now the Third National Communication (TNC, discussed at A.7). More recently, with the technical and financial assistance of UNEP and the UDP through the Capacity Development for the Clean Development Mechanism Project (the CD4CDM Project), a standardized baseline is being finalized for the power sector. The main objectives of the project are: (1) determination and validation of the national grid emission factor; and (2) capacity building of relevant institutions for updating the grid emission factor. A standardized baseline for the national

electricity system has passed all quality assurance and due diligence processes, and it is expected to be approved imminently by the CDM Executive Board (CDM EB). The grid emission factor has been used to calculate the emission reductions that are expected from the project, and will form part of the measurement, reporting and verification (MRV) system that the NAMA project will put in place for the power sector.

UNEP and UDP have also supported Mauritius with the TNA project. The current project will build on the outputs of the GEF-funded TNA project. Wind energy development was identified as a priority technology under the TNA project. A Cabinet decision on 16 August 2013 took note of the recommendations in the TNA-TAP reports including the "promotion of the use of renewable energy, reduce fuel importation and promote greenhouse emissions reduction". The TNA project has carried out detailed barriers analysis for wind technology as well as the necessary enabling framework for its transfer and diffusion. These form the basis for the discussion at A.6.

Further, UNEP has since 2008 identified climate change as one of six thematic priorities/focus during 2010-2013 as per decision taken by the Governing Council / Global Ministerial Environment Forum as well as the global framework agreed through the UNFCCC. So far, UNEP has been developing a strategic process to identify areas where UNEP skills and capabilities are distinctive in the area of climate change. These include (i) a broad environmental perspective that treats the range of environmental issues and development concerns in an integrated manner. (ii) a global mandate for action that allows UNEP to both work with developed and developing countries on normative frameworks and undertake projects in developing countries. (iii) Scientific expertise and a science based approach that is strongly supported by a wide network of scientific institutions and UNEP collaborating centres and (iv) convening power and a proven ability to work in a multi-stakeholder manner, including with the private sector. UNEP climate change strategy is structured around four themes – mitigation, adaptation, science, and communication.

The project conforms with the "Expected Accomplishment (b)" of the proposed UNEP 2014-2017 Climate Change Programme of Work; "Energy efficiency is improved and the use of renewable energy is increased in partner countries to help reduce greenhouse gas emissions and other pollutants as part of their low emission development pathways.

A.4. The baseline project and the problem that it seeks to address:

A.4.1. The global environmental problem and barriers that need to be addressed

A.4.1.1. National GHG Emissions

The Paris Agreement defines the global objective as "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels". IPCC Fifth Assessment report has recommended that global GHG emissions need to reduce by 40 to 70% below 2010 levels by 2050 to have a likelihood of limiting the temperatures below 2°C. This level of effort requires peaking of emissions by 2020 and thereafter a sharp decline in emissions. Achieving this would require significant efforts in all countries.

The GHG emissions of Republic of Mauritius (RoM) are quite small fraction of global emissions but have been growing at a significant rate. The country's historical trend in CO₂ emission is shown in Figure 1 below. As per the projections, per capita GHG emissions in RoM may reach ~4.5 tCO₂ in 2020, and if extrapolated to 2050 will lead to a per capita emission equal to 10.25 tCO₂. The projections made are confirmed by actual emission data observed. The bar charts in red depict the projected CO₂ emissions under the 'business-as-usual' scenario until 2020. The black bar charts show the measured quantities of CO₂ emitted for years where data is available. Although these projections were made more than a decade ago, the measured data agree very well with the projected values of CO₂ emissions. Though one observes that actual emissions post 2010 have grown at lower rate than the projected emissions. This is primarily because to more efficient use of energy and also shift from manufacturing based economy to a service economy.

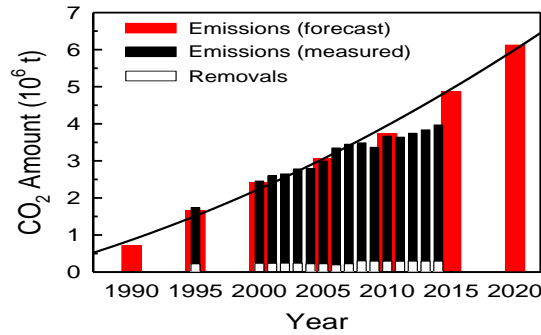


Figure 1: Projected (Red) and Measured (Black) Emissions of Carbon Dioxide

The Energy (which include fuel use for transport) and Waste sectors remained the largest contributors of GHG emissions with the share from energy increasing from 59% in the year 2000 to 69% in 2006 while that of the Waste sector remained stable at some 30 % (Figure 2 using data reported in the SNC). The share of Agriculture decreased from 6.0% to 4.5 % while that of the Industrial Processes sector shrunk from 7.1% to 1.4%.

During the last decade, national total primary energy requirement (TPER) has grown at an annual rate close to 5%. The two largest energy consumers are the power and transport sectors. In 2014, ~86% (1,279 ktoe) of TPER was met by imported fossil fuels, whilst ~14% was derived from RE sources. Bagasse contributed about 91% of RE and 5% was derived from hydro, while wind, photovoltaic, landfill gas and fuel wood contributed the remaining 4%. Import of coal has considerably increased over the years accounting for 30.9% of TPER, and 42.9% of total electricity production in 2014. Figure 3 shows the country’s energy source mix. The reliance on external sources of fossil fuels and vulnerability to external shocks are a major energy security concern and, hence, a key motivator for change.

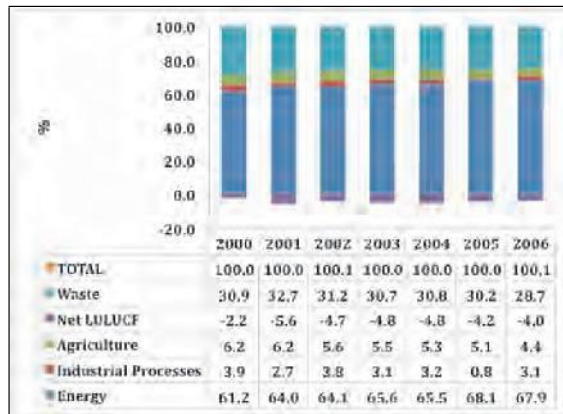


Figure 2: Share of GHG Emissions By Sector

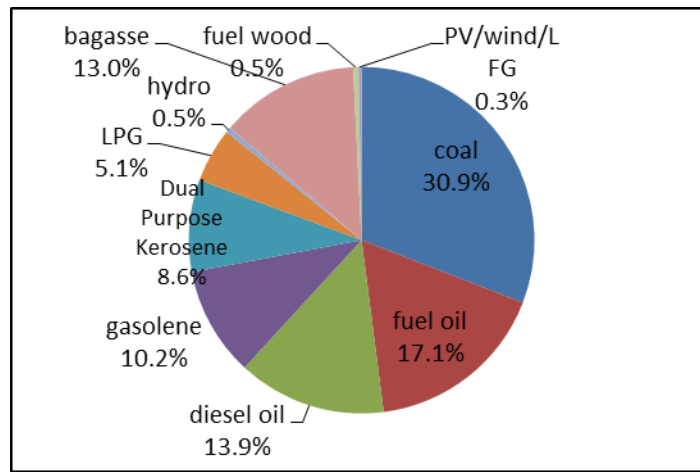


Figure 3: Primary Energy Sources, 2014 (In %)

Fuel use in transport is another major source of emission in the energy sector. The increasing number of vehicles has led to corresponding growth in fuel demand and carbon dioxide emission. Traffic congestion has become a serious problem costing the economy around 1.3% of GDP. Despite the relatively small size of the island, the average distances of commuting are high, and time and energy consuming.

The waste disposal sector, including solid and liquid wastes, is the second major source of GHG emissions in the country. Liquid wastes include domestic and industrial effluents and run off from agricultural fields. Sewerage covers only 26% of households and the rest mainly use on-site wastewater disposal systems consisting of septic tanks, absorption pits and cesspits. The large industries (e.g. sugar industry) and also, the large tourist resorts, have their own wastewater treatment facilities. Most other industries are connected to the sewerage system, while smaller tourist resorts use septic tanks and absorption pit systems. Solid waste management progressed from open dumps to the single landfill in 2002 but only a part of the methane emitted from the landfill is being captured for the generation of electricity (~20 GWh in 2014).

The land use, land use change and forestry (LULUCF) sector comprised the sub-categories of Forest Land, Cropland, Wetlands, Settlement and Other land. During the period 2000-2006, the LULUCF sector represented a net removal of CO₂ from the atmosphere. The net removal was much lower in the year 2000, due to the conversion of some 300 ha of forest land to wetlands for the commissioning of a dam. The removals represented 7% of total national emissions in the year 2000 and 6% in 2006. Mauritius is densely populated and there is considerable pressure on agricultural land and forests. The proportion of land covered by forests has decreased from around 31% in 1995 to 25.5% in 2011. About 43% of the land area is covered by agriculture and approximately 28% by built up areas.

The RoM is already feeling the global impacts of climate change through stronger cyclone events, heavier rainfall episodes, warmer temperatures, and reduced rainfall. It is therefore, undeniably in the interest of the RoM to contribute to the reduction of GHGs, be it in an infinitely small amount. In its recently submitted initial nationally determined contribution (INDC) to the UNFCCC in the context of COP21, Mauritius has reported that it intends to reduce its economy wide GHG emissions by 30%, by the year 2030, relative to the business as usual scenario of 7 MtCO₂e.

A.4.1.2. Barriers in mitigating GHG emissions and problem that project seeks to address

The Mauritian economy is a highly diversified one, based on tourism, textile and manufacturing, cane products, and financial services. In recent years, Information and Communication Technology, seafood, hospitality and property development, healthcare, education and training have emerged as important sectors, attracting substantial investment from both local and foreign investors.

Government has also initiated to develop the ocean (blue) economy and has made a sustained emphasis too on investment in social welfare, health and education. The challenge is to further boost economic growth, develop human capital, and promote new emerging sectors in order to move Mauritius towards a more knowledge-based economy while preserving its ecosystems and its longstanding commitment to social welfare.

The country's energy strategy aims for the following:

- Increase the share of renewable sources of energy in electricity supply (from 17.5 % presently to 35% in 2025);
- Improve energy efficiency and conservation in all sectors through demand-side management measures (with targeted energy efficiency gains of 10% by 2025 over the 2008 baseline); and
- Create a financially sound and self-sustainable modern electricity sector, a transparent and fair regulatory environment that appropriately balances the interests of consumers, shareholders and suppliers, conditions that provide efficient supply of electricity to consumers and improvement in customer services.

The GoM has been taking climate change seriously and making efforts to integrate climate change issues in its development planning. The first action aimed at implementing the Convention was the drawing up of a Climate Change Action Plan in 1998 which highlighted the high vulnerability of the country to climate change as a SIDS. The Action Plan highlighted the importance of reducing GHG emissions and increasing the sink capacity towards achieving the major objective of the Convention, even if the country had no obligations to do so as a Non-Annex I Party. A Climate Change Division (CCD) has been created within the Ministry of Environment & Sustainable Development. It coordinates the country's actions on climate change that has put in place a system to monitor and assess vulnerability and adaptation to climate change that allows for the monitoring of climate vulnerability and the results of adaptation actions, taking into account gender issues. CCD is also responsible for preparing the national communication (NC). SNC of RoM undertook a mitigation analysis and identified mitigation opportunities and actions. TNA project was also another step in identifying the priority mitigation technologies based on the analysis of baseline emissions growth and mitigation opportunities in SNC. These efforts have helped in understanding the growth in GHG emissions and also identifying opportunities.

The **problem** that this project seeks to address is the lack of capacity and institutional coordination of the different national stakeholders in regards to climate change. Presently though mechanisms are being put in place for integrating climate change mitigation actions in planning and coordination of implementation, the GOM has been hindered by the lack of capacities beyond the CCD in developing implementation plans, seeking international support in implementing the mitigation opportunities, and more systematic coordination of efforts. The limited awareness and knowledge of the various key stakeholder groups on climate change, lack of studies quantifying the impacts on different sectors of the economy, limited financial means and human resources, and inadequate incorporation of climate change in the national development and planning processes have been the main **barriers** to the implementation of the mitigation opportunities. In particular for the electricity sector, the main contributor to GHG emissions, low awareness and need for initial high investment costs limit the penetration of RE and the adoption of energy efficiency and conservation measures. The challenge in the transport sector, which is key contributor to energy demand and, hence, GHG emissions, is lack of capacity to develop multi-sectoral approach as well as capital intensive nature of the investments required. In Forestry sector though the policies on sustainable development and protection of lands are sound, they have not been particularly successful. Enforcement mechanisms are weak and as such, adherence to planning guidelines and legislation are loose.

The project will address the problem through enhancing institutional and human capacities to identify, develop and implement NAMAs, the international instrument for implementing mitigation actions. The project will build capacities through developing and implementing a NAMA seeking to increase the use of RE in the electricity sector which is the biggest contributor to GHG emissions and is a critical sector for achieving sustainable growth. The project will include piloting NAMA through investments in wind energy sector building on some of the existing efforts. Further, to enhance the feedback mechanism and provide better oversight to implementation, the project will develop capacities and institutional arrangements for MRV of mitigation actions.

A.4.2 Baseline Scenario

A.4.2.1 Mitigation actions currently undertaken

Growing population, income growth and changing lifestyles are expected to result in continuous increase in energy demand, which is likely to be met mainly through fossil fuels. This will result in continuous growth in GHG emissions.

As mentioned earlier a number of projects and interventions have been initiated in energy sector to address the issues of energy efficiency and energy generation, as well as in other sectors that also impact the growth in emissions. The SNC Report (2010) describes the following climate change mitigation measures that have already been adopted:

Energy Sector:

- Replacement of household incandescent bulbs with energy saving lamps;
- Partial replacement of sodium vapour lamps for street lighting with energy saving lamps;
- Energy efficiency in buildings, electrical domestic appliances;
- Shift to energy-efficient appliances;
- Increasing the energy conversion efficiency of bagasse
- Phasing out of HFCs and PFCs;
- Promotion of solar water heaters through financial incentives;
- Installation of four wind turbines in Rodrigues;

Waste Disposal:

- Flaring of Landfill gas;

LULUCF:

- Setting-up of endemic gardens in schools to promote awareness on enhancing sink capacity;
- Planting of mangroves;
- Afforestation and tree planting campaign;
- Reforestation of about 770 hectares of state forest lands including some 20 hectares of degraded mountain slopes, which represent more than 1 million new trees.
- Planting of 100,000 trees and ornamental seedlings under the National Tree Planting Campaign,
- Reduction in the volume of timber exploited.

Though these mitigation measures have been identified and some of them are under implementation, the barriers mentioned above will hinder full and effective achievements of the national mitigation goals. Therefore, it is necessary to establish new institutional arrangements to coordinate and monitor the implementation of the mitigation measures as well as to build capacities to leverage international finance through instrument like NAMAs.

A.4.2.2 Current initiatives to identify, formulate & implement NAMAs

As mentioned earlier the SNC of describes the development of GHG emissions baseline scenario, mitigation scenario and identifies mitigation opportunities in key sectors critical for sustainable development. The analysis was undertaken for time period of 2000 to 2040 and covered energy (electricity and transport), agriculture, waste, and forestry. This exercise was coordinated by CCD, which is responsible for the preparation of NC. The exercise though created awareness of mitigation opportunities didn't develop capacities in terms of developing implementation plans. Further, the awareness to significant extent was limited to CCD and to limited extent with other line ministries or wider stakeholders. SNC was completed and submitted in 2010. In absence of any institutional mechanism for translating generic opportunities into project concepts and project documents, the baseline scenario is that only a few of these opportunities will be implemented. There has no supportive policy that has been in put in place to support investment in RE. The policy/strategy just gives the targets to be reached in 2025 and 2030, without specifying any supporting instruments/mechanisms.

The TNA project built upon the SNC analysis and conducted an electricity end use analysis to identify mitigation technologies for demand- side management for the three end use sectors. The primary aim of TNA was to identify priority technologies for mitigation and adaptation and develop technology action plans, which are strategy documents for increasing the use of technologies identified. TNA project created awareness of tool for prioritizing

technologies. It was based on creating project specific coordination mechanism between CCD and other line ministries. Thus the project enhanced the awareness of prioritization process and key technological needs among government stakeholders as well as non-governmental stakeholders. As the aim of the project was to demonstrate methodologies and tools for prioritization of technology, assessment of barriers, and identifying actions to address barriers, the project didn't strengthen or establish any coordination mechanism for identifying mitigation measures and implementing them.

The Cancun Agreement (2011) defined the concept of NAMAs as a tool for implementation of mitigation actions. This has also formed the basis for funding through the NAMA Facility established by German government and through Green Climate Fund (GCF). NAMAs are both a tool for domestic actions as well as for actions that could be implemented through international support. Thus NAMAs provide a sound basis for translating mitigation strategy into implementation actions. Though Paris agreement calls on countries to prepare Nationally Determined Contribution (NDC), NAMAs will be the central element for implementing the NDCs. Thus NAMAs as an instrument of implementing mitigation actions remain relevant in post-2020 time frame as well.

Currently there is no initiative or projects for developing NAMAs in the country. At COP 17, in Durban, the Parties recognized “the need for support for enabling activities to assist developing country Parties in the identification and preparation of NAMAs for submission to the registry, and support for their implementation”.⁵ Mauritius is yet to develop and register a NAMA for accessing international climate finance on the UNFCCC NAMA Registry.

In absence of the present project the coordination of identifying, developing and implementing mitigation actions will be based on existing mechanisms that show a lack of process and procedural framework for focusing attention on NAMAs. Further, though CCD has good understanding and knowledge of NAMAs, it lacks capacities to guide other ministries in developing NAMAs. Other ministries will thus continue to have little understanding of NAMAs and their use to implement mitigation actions in context of sustainable development. Without the present project the level of actualization of mitigation actions is expected to be low, as lack of financial resources is a key constraint. In addition in absence of systemic capacity building on developing NAMAs to leverage climate finance, only those actions that could be implemented through national engagement at small scale are expected to happen.

A.4.2.3. Promoting investments in the energy sector to mitigate GHG emissions

Energy security is a key driver for increasing the use of renewable energy. Mauritius is highly dependent on imported fossil fuels (>80%) for its energy requirement. In 2014, renewable electricity was generated from a mixture of sources, including hydro, bagasse, PV, wind and LFG, and, together, represented 14% of total primary energy requirement of Mauritius. Ninety six percent (96%) of this amount was generated from bagasse, PV, wind and LFG by IPPs. Only minimal amounts of fuel wood are used for energy purposes. Renewable energy production has levelled off despite the adoption of more recent technologies to raise the conversion efficiency of bagasse. There is a strong political will to exploit other renewables such as wind, solar and biomass.

Much effort is being made both from the MEPU and the CEB to increase the share of renewable energy in Mauritius generation mix. The government has set up the Mauritius renewable energy agency (MARENA) to look after promotion of renewable energy projects. Several studies specific to renewable energy are in progress under the chair of the MEPU on removal of barriers to energy efficiency and conservation in buildings in Mauritius. The development of solar technologies is also strongly supported by the government and few solar initiatives are currently undergoing, among them:

- 15 MW Sarako PV project - in operation
- About 3 MW solar has been installed under the Small-Scale Distributed Generation Project scheme in Mauritius and Rodrigues.
- CEB is currently inviting residential customers to produce electricity for own consumption under a net metering scheme from residential and commercial customers.

⁵ Mauritius is seeking the support of UNEP and funding resources from GEF for the establishment of an institutional arrangement for coordinating development and implementation of NAMAs anchored by national NAMA Registry and the implementation of pilot NAMAs with MRV systems.

Wind is a key renewable energy resource in Mauritius. Efforts on developing wind energy started in 2010 and a first set of investment were announced in 2011. The first phase of the wind energy farm in the Plaines des Roches (9.35MW) has already started, with commissioning taking place in January 2016. The wind farm is operated by Aerowatt Mauritius Ltd, the local affiliate of Quadran.⁶ Though wind is considered as one of the key RE technologies no specific policies or investment programmes have been put in place to promote investment in Wind energy.

Despite of these efforts, high upfront cost of investment, lack of incentives for making RE competitive, lack of regulatory framework to facilitate RE, lack of technical expertise to implement utility scale projects, are key barriers in promoting wind energy and RE in general.

Though efforts are going on by the GoM to promote private investments in RE, without the present project, the level of these investments is expected to remain low, as lack of right enabling environment for private investments in RE, as well as lack of capacity for identifying climate finance sources to support the financial mechanism to make investment in utility scale projects attractive and competitive.

A.4.2.4 Initiatives towards establishment of MRV system and national registry for NAMAs

NAMA is an international instrument to implement the mitigation goals/targets that countries set for themselves. NAMAs covers both, actions taken by countries using its own resources (domestic NAMAs) and actions that are supported by international climate finance (supported NAMAs).

The GoM is currently implementing policies and actions which are primarily driven by sustainable development. Many of these are also reducing GHG emissions. Though CCD is the coordinating agency for climate change actions, there is no formally established system for systematic collection of information and oversight on progress of policies and programmes. It has to be noted that the Environment Coordination Committee (ECC) which is a Statutory Committee monitors certain policies/programmes but in terms of ensuring that all public institutions are adequately informed of climate change and that their actions and interventions are adapted to address adverse effects of climate change. The country lacks a centralized data base to record all the actions to enable oversight on implementation of these actions as well as on impacts of these actions vis-à-vis reduction of GHG emissions. The existing mechanism to collect information is thus project driven and there is no permanent mechanism of collecting and collating the information of all the actions. It has to be noted that CCD has a Climate Change Information Centre (CCIC) but this is focussed on providing information to stakeholders on climate change related reports, impacts, and adaptation tool kits. The collection and storage of information on mitigation actions and impacts are not integrated in the CCIC.

Currently, the CCD lacks capacity to develop guidelines for reporting, tools for estimation of GHG emissions impacts, database for storing information on mitigation actions being undertaken, as well as to perform regular reporting on progress in implementing these mitigation actions. In the base line scenario, given other government development priorities, own resources are unlikely to be dedicated to developing a national registry and a system of MRV for mitigation actions to systematically collect information on GHG impacts of these actions. Therefore, in absence of this project, lack of knowledge on the issue and lack of capacities to develop such a framework will continue.

A. 5. [Incremental /Additional cost reasoning](#): describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated [global environmental benefits](#) (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

A.5.1. Project Framework: Objective, Outcomes & Outputs

The **Objective** of the GEF MSP is to help ensure a low carbon path for the Mauritius, by establishing the national capacity for developing and implementing NAMAs as well as seeking support for NAMAs, particularly those found in various sustainable development and low carbon development analysis and strategies, and further, develop the local capability to design and implement NAMAs in the energy sector. The NAMA capacity building activities will use power sector, and in particular utility-scale wind energy projects, to provide capacity through actual development of a NAMA.

⁶ <http://quadran.fr/index.php/fr/divers/contact> - accessed 21 March 2016.

The institutional capacity to coordinate the development and implementation of NAMAs along with human capacities would create the required capacity in the economy to develop NAMAs for mitigation opportunities identified in context of sustainable development. This will be transposed to other sectors and GHG mitigation initiatives.

Based on the Theory of Change shown in Annex A-2, the GEF MSP is structured around three coherent components. All the three components are about capacity building, which is coupled with demonstrating the elements of NAMA and MRV design through actual hands on training.

Component 1: Building national capacity for cross-sectoral engagement in the formulation and implementation of NAMAs

As mentioned CCD is the coordinating entity for climate change related activities in RoM. CCD primarily focuses enabling activities; the preparation of the NC (National Communication) and BUR (Biennial Update Report) for submission to the UNFCCC, as well as, on overall climate change policy related work. Component 1 will build upon existing institutional framework and strengthen CCD and other national stakeholders to coordinate the identification, formulation and implementation of NAMAs. The component will focus on developing mechanism for involving other key government and non-government stakeholders who play a role in implementation of mitigation actions. Further, the project will also work with key stakeholders in developing process and procedures for coordination, build capacity on tools and guidance for developing NAMAs, etc. The component will also, taking into account the INDC of RoM, develop national voluntary targets for GHG reduction across key sectors of the economy to provide an overarching framework for identifying and implementing NAMAs. Stakeholders, assisted by appropriate tools such as marginal abatement cost curves, tools for prioritization, will then identify the NAMAs to achieve the targets.

The GEF finance will support development of tools and guidance, organizing of capacity building workshops, development of national registry, as well as recommendations for NAMA coordination mechanisms and related process and procedures. The in-kind co-financing will support part of international expertise in undertaking the above activities.

The outcomes, outputs and activities of this component are:

Expected Outcome 1. National capability to identify, prioritize, register and monitor NAMAs developed.

The **Key Outputs** under Component 1 are the following:

- 1.1: Lead agency with convening power designated, and supported by a strong team involving key stakeholders established.
- 1.2: A national voluntary emission reduction target formulated based on National reference GHG emission baseline established for each sector.
- 1.3: A national NAMA list constituted and submitted to the "International Registry"
- 1.4: Partners for "Supported NAMAs" identified
- 1.5: Programmatic Sectoral NAMAs drafted
- 1.6: A national NAMA registry established
- 1.7: Approaches & methodologies for classifying and prioritizing NAMAs developed and implemented
- 1.8: Gender mainstreamed into this project and capacity building activities

The outputs related to Component 1 will be accomplished through the following Activities (the link between outputs and activities is described in Annex I):

- 1.1.1: Develop options of institutional arrangements to coordinate Mitigation actions
- 1.1.2: Develop process, procedure and guidelines for NAMA identification, development and implementation
- 1.1.3: Initiate process of government endorsement and establishment of NLCSDC

1.2.1: Review the Third National Communication analysis of national GHG emissions and development of National BAU emissions and mitigation opportunities identified

1.3.1: Identification and analysis of potential NAMAs

1.3.2: Analysis of costs of implementation of potential mitigation opportunities and development of MAC

1.4.1: Assessment of potential international support providers for identify NAMAs

1.5.1: Formulations of programmatic approach to NAMAs

1.6.1: Establishing the national NAMA registry

1.7.1: Development of NAMA Prioritization framework

1.7.2: Develop prioritized list of NAMAs

1.8.1: Conduct gender analysis and prepare gender mainstreaming report

Component 2: Design & Implementation of pilot NAMA in the Energy Sector

Component 2 is the demonstration component that would form the basis for capacity development on NAMA development and implementation. Energy being the key sector and electricity a primary focus of sustainable development and energy security, the component 2 will support relevant key stakeholders in developing NAMA for promoting utility scale RE capacity in RoM. The GEF finances will support development of The NAMA. The NAMA will identify the barriers to promoting investment in utility scale wind energy projects. This component will implement the NAMA through development of necessary enabling conditions (regulations, approval processes, investment incentives, etc to address the identified barriers) to channel investments to utility scale RE projects. Further, a financial incentive mechanism will be developed as part of the NAMA to leverage international climate finance in directing investments towards development of utility scale RE capacity. These elements will be developed through GEF financing support.

An added element of the component is implementation and operation of utility scale wind energy project. This will be achieved through co-financing from private sector. The GEF project will use the opportunity of GoM's ongoing efforts to attract private sector investment in utility scale projects. GoM has been in discussions with two private entities for funding utility scale wind projects. During project preparation the project team had discussions with the two entities and identified the challenges they face in establishing the utility scale wind projects. The concept of NAMA was explained to the private entities and also the fact that a key component of NAMA implementation will focus on addressing barriers to investments. The NAMA piloting thus would leverage the creation of right enabling environment to encourage the funding in these two utility scale projects, as listed in table 1 below. Further, in the course of project, NAMA piloting will ensue identification of climate finance sources and leverage them to support the financial mechanism to make investment in utility scale projects attractive and competitive.

Aerowatt Mauritius Ltd. will implement the second phase of its first wind farm project in Plaines de Roche which represents an additional capacity of 8.5 MW wind farm, the investment related to this second phase, \$18.23 Million, is committed as co-financing to this GEF project. The other project providing co-financing is the 29.4MW wind energy farm to be installed in Plaines Sophie. This wind energy farm, which is targeted to start in 2017, will provide \$15 Million co-financing to the GEF project (see Table below).

Table 1: Utility scale wind projects in MAURITIUS

Proponent	Location	Capacity, MW	Co-financing for GEF project, Million\$	Installation Date
Suzlon Padgreen Ltd. Co.	Plaines Sophie	29.4	15.00	2017-2018
Aerowatt Mauritius Ltd.	Plaines de Roches (second phase)	8.5	18.23	2017-2018
Total		37.9	33.23	

Expected Outcome 2: Pilot energy sector NAMA designed and implementation started

The Key Outputs under Component 2 are the following:

- 2.1. Electricity generation sector NAMA on utility-scale wind energy analysed, designed & financed
- 2.2. Two utility scale Wind farm projects implemented through private sector co-financing contributing to GHG emissions reduction
- 2.3. An attractive policy, regulatory, and supportive framework developed to facilitate investment for utility-scale RE projects

The outputs related to Component 2 will be accomplished through the following Activities (the link between outputs and activities is described in Annex I):

- 2.1.1: Assessment of RE potential in RoM
- 2.1.2: Detailed barrier analysis to RE implementation in RoM
- 2.1.3: Analyze techno-economic feasibility of utility scale wind projects
- 2.1.4: Project emission targets with implementation of NAMA
- 2.2.1: Implementation of wind farm projects
- 2.3.1: Develop RE Grid integration strategy
- 2.3.2: Develop options for streamlining project approval process
- 2.3.3: Review of Legal and contractual framework for tendering for RE electricity based on international best practices
- 2.3.4: Develop RE/wind energy potential site map
- 2.3.5: Assessment of International concessional financial support for REs/NAMAs
- 2.3.6: Development of knowledge products prepared for awareness raising and awareness raising workshops for national financing institutions

Component 3: Establishment of MRV system and national registry for NAMAs

MRV is an essential element of NAMAs as well as a very useful tool to generate feedback and provide information on progress in achieving mitigation strategies and NAMAs. Further, a robust MRV system enables transparency which enhances chances of leveraging international climate finance. Component 3 will work at two levels: one, develop a MRV institutional framework at country level, and two, specific measurement and reporting protocol for energy sector with approaches for verification. The MRV institutional framework will define the roles and responsibilities, as well as process and procedures for MRV of mitigation action. The energy sector MRV will be tested and finalized based on the pilot project implemented as part of component 2. Further, the component will work on developing capacity and knowledge of local stakeholders in operating the MRV system and undertaking MRV of energy sector activities.

GEF finances will support undertaking the above activities. Co-finances will be used to bring in international expertise for supporting part of the activities.

Expected Outcome 3: National Capability to MRV (Monitoring, Reporting & Verifying) NAMAs strengthened

The Key Outputs under Component 3 are the following:

- 3.1: Institutional framework and organizational linkages for MRV, including link to in the national registry mechanism, established
- 3.2: MRV system, including monitoring plan covering key parameters for the electricity generation sector, designed & implemented
- 3.3: Local technical professionals to conduct MRV enabled
- 3.4: MRV technical committee specific to the energy pilot sector constituted

The outputs related to Component 3 will be accomplished through the following Activities (the link between outputs and activities is described in Annex I):

- 3.1.1: Analysis and development of options for domestic MRV System
- 3.1.2: Stakeholder consultations and notification of domestic MRV system
- 3.2.1: Design and implement monitoring plan for the Electricity Generation Sector
- 3.2.2: Develop reporting and verification requirements for Electricity Generation Sector
- 3.2.3: Conduct training for MRV of Electricity Generation Sector
- 3.3.1: Design and conduct training workshops for awareness raising on domestic MRV system
- 3.4.1: Design and conduct training for developing and implementing MRV for NAMAs

A.5.2. Additional cost reasoning and expected contributions from the baseline, the GEFTF and co-financing

The incremental aspect of the GEF project is best understood in light of the energy status of Mauritius. Figure 4 shows the increasing dependence of Mauritius on imported fossil fuels. The energy intensity of the economy in toe / Rs 100,000 of GDP at 2000 prices has decreased from 0.88 to 0.72 between 2004 and 2014.⁷ Over the same period, the primary energy requirement (PER) has increased from 1255.8 ktoe to 1454.8 ktoe. The dependence of Mauritius on imported energy sources reached its historical maximum at ~86% in 2014, and the energy bill amounted to a high 18% of total imports bill.⁸

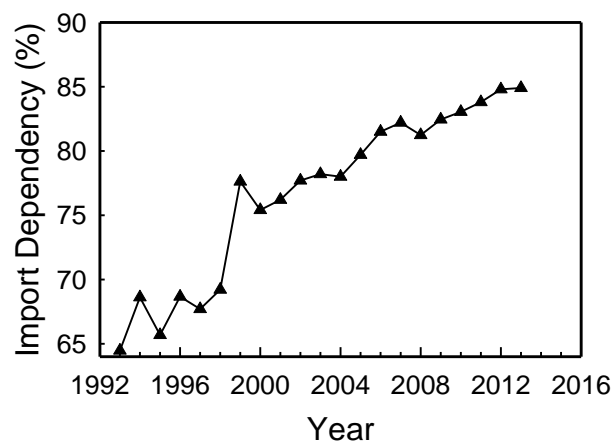


Figure 4: Fossil fuel import dependency of Mauritius: 1993 – 2013.

⁷ Statistics Mauritius. (2014) Digest of Water and Energy Statistics – 2013. Ministry of Finance and Economic Development: Port Louis; Statistics Mauritius. (2015) Energy and Water Statistics – 2014. Ministry of Finance and Economic Development: Port Louis.

⁸ Statistics Mauritius. (2015) Energy and Water Statistics – 2014. Ministry of Finance and Economic Development: Port Louis.

Currently electricity generation in Mauritius accounts for ~62% of the total emission. Table 2 summarizes the key emission sources in Mauritius. The challenge in the economy is to further boost economic growth to meet the human development goals, which implies the energy demand will grow, as well as, electricity generation in the economy. Given the limitation of natural resources and an island economy, the focus of future development is on service sector and more knowledge based economy. Thus the energy demand in large part will come from demand for electricity in the future. During the last decade the energy demand has grown an annual rate of 5%. Mauritius is heavily depended on import of energy sources and coal is a major source of fuel for generating electricity. Presently close to 50% of electricity is generated in coal based thermal power plants. Thus high dependence on imported fossil fuel and growing electricity demand is reflected in the share of emissions from electricity sector increasing from 58.3% in 2008 to 61.6% in 2013.

Table 2: GHG emissions by Sectors in Mauritius

Sector	2008		2010		2014 ¹	
	Quantity (1000 t)	%	Quantity (1000 t)	%	Quantity (1000 t)	%
Energy industries (electricity)	2,032.0	58.3	2,158.3	60.3	2,449.1	61.7
Manufacturing industries	456.0	13.1	360.4	10.1	332.7	8.4
Transport	813.0	23.3	887.0	24.8	996.5	25.1
Residential	131.0	3.8	135.6	3.8	141.0	3.6
Other (incl. Agriculture and Trade)	53.8	1.5	39.7	1.1	49.5	1.2
Total	3485.8	100	3,581.0	100	3,968.8	100

Source: CSO, Environment Statistic 2014, Digest of Environment 2013.
¹ Provisional.

The reliance on external source of energy and vulnerability to market shocks are a major energy security concern and a key motivator for change. A number of policies and strategies have been outlined to increase the share of RE, but the share of RE continues to be low due to lack of any systematic effort to incentivize investments in RE sources, such as wind and solar. For example, the country's energy strategy aims to achieve 35% of total electricity generation from renewable energy sources by 2025. Bagasse based biomass, a co-product of the sugar production, is main source of renewable electricity and a small share comes from hydro. The potential for capacity growth in bagasse is negligible and only limited option is to improve efficiency. Due to geographical conditions, the hydro potential is very limited. Solar and Wind have been identified as key RE sources to increase the share. Despite efforts the share has remained negligible, with PV, wind and LFG comprising only 1.5% of total electricity generation in 2014. This has mainly due to low awareness, human and institutional capacity, as well as; high cost of investment in renewable energy limits the use of RE in Mauritius.

Wind based electricity is cheaper, based on long term marginal cost, compared to the option of installing new gas or oil based capacity. Wind presently is only considered as source for meeting peak energy demand and not as a baseload. Thus the cost of electricity generation from wind cannot be compared with a base load plant. Nonetheless, though long term marginal cost of wind is lower, due to perceived risks of investment as well as barriers to developing and implementing wind projects the expected unit price of electricity by investors is higher compared to the fossil fuel based power plants. Thus wind energy projects need higher tariff to address risks. Also, proper enabling environment to address the barriers (information on wind resource availability, access to finance at reasonable costs, streamlined approval processes, capacities in the grid to absorb wind energy, etc.) is required to attract investment in the wind based RE.

Thus in the baseline scenario the efforts to promote RE will be based primarily on limited national resources and a limited access to international resources. The RE penetration is likely to be lower than the rate of growth of electricity demand and likely foresee constant or slightly declining share of RE. Further, the government efforts on climate

change are likely to enhance but in absence of a clear institutional framework for climate change coordination and capacities in various government departments, mitigation efforts are unlikely to increase in scale.

NAMA, an instrument for planning and implementing mitigation actions in context of sustainable development, is an instrument that could help address the challenges Mauritius faces in increasing investments in RE, including wind energy. The instrument is also key to leveraging international climate finance to enhance finances for investment in mitigation opportunities, in this case in RE based electricity including wind energy. The capacities to leverage international climate finance through instruments like NAMAs is limited, mainly because of the limited awareness among local stakeholders. Any capacity resides within a limited few individuals in the Climate Change Division, MoESDDBM. Consequently, Mauritius has not managed to develop NAMAs as a tool to leverage international climate finance to facilitate the scaling up of RE in the country.

At COP 17, in Durban, the Parties recognized “the need for support for enabling activities to assist developing country Parties in the identification and preparation of NAMAs for submission to the registry, and support for their implementation” (Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention - decision [1/CP.17]). In line with this the GoM will be supported for the definition, design, and development of NAMAs.

The key objective of GEF intervention is to create institutional and human capacities to identify and integrate mitigation options with development planning. Further, increase capacities and awareness to understand and use the tools like NAMA to leverage international climate finance for meeting countries sustainable development goals, while limiting and reducing GHG emissions. Thus, in absence of GEF resources this is unlikely to happen or will happen at a limited scale. Therefore, an added value of the GEF funding is to enable transformational change.

The project will also build capacity through demonstration of development of a pilot NAMA for wind energy generation and its implementation. The demonstration effect is expected to lead to further NAMA development as well as full scale implementation of RE NAMA based on experience of the pilot NAMA. GEF funds will support development of domestic MRV system and capacities to MRV climate change mitigation actions. This is an important element of attracting international climate finance for implementing NAMAs.

The project is structured into three components, which are the necessary steps to refine Mauritius voluntary mitigation targets and trigger an enabling framework for the identification and implementation of NAMAs. The GEF project is designed specifically with the objective of leading the NAMA development and implementation process. The project defines a framework to formulate NAMAs which integrates all on-going activities so that they contribute efficiently towards this objective.

The GEF project will then carry out the additional activities within this framework necessary to the establishment of the NAMAs. The GEF project will pilot the implementation of a NAMA project in the energy sector that has already been targeted under the country’s long-term energy strategy, which has also been identified as priority in the recently completed TNA Project.

Investments for energy projects/programs have been planned and are now being solicited. Preliminary estimates of their potential contribution to the GHG emissions reduction have been done. For the wind farm projects that will be targeted as pilot NAMAs, investments will be from Public-Private Partnership (PPP) arrangements. Thus, this is where the bulk of co-financing will come from for this GEF project. The wind farm projects have not been explicitly defined yet as NAMAs. The process of doing that and also, the building of local capacity for designing these projects to be the NAMA projects; and having these projects recognized as NAMAs (by having them accepted and registered in the international registry) will be funded by the GEFTF. The GEF financing will be used for the needed capacity development and institution building to make these pilot energy projects, including the programmatic sectoral NAMAs formulated under Component 1, officially recognized as Mauritius’ NAMAs. Importantly, the third component of the project proposes to put in place a robust MRV system for the power sector and which will be tested and validated using the baseline wind energy projects. The MRV mechanisms will be replicated for other sectors based on this experience. The MRV system is an absolute necessity for attracting international climate finance for supported NAMAs.

The GEF finances will support the objectives of the Long-Term Energy Strategy (LTES) 2009 – 2025 that provides the blueprint for the development of the energy sector in Mauritius.⁹ The RE targets to 2025 are summarised in Table 3 below. These plans envisage increase in share of Wind in total electricity generation to 6% in 2020 and 8% in 2025. As such, the project is embedded in a context in which the delivery of national socioeconomic benefits will be equally important to the country’s contribution to GHG Emission Reductions. The voluntary nature of NAMA development and implementation ensures that the Government will seek to implement mitigation measures that have a clear positive impact on the national economy and are fully aligned with national sustainable development goals. The identification of cost effective mitigation measures, and their implementation as NAMAs will provide a clear demonstration of effective mechanisms to integrate national sustainable development and greenhouse gas mitigation goals.

Table 3: Electricity mix targets, 2010-2025.

Fuel Source		Percentage of Total Electricity Generated			
Renewable		2010	2015	2020	2025
	Bagasse	16	13	14	17
	Hydro	4	3	3	2
	Waste-to-Energy	0	5	4	4
	Wind	0	2	6	8
	Solar PV	0	1	1	2
	Geothermal	0	0	0	2
<i>Sub-total</i>		20	24	28	35
Non-renewable	Fuel oil	37	31	28	25
	Coal	43	45	44	40
<i>Sub-total</i>		80	76	72	65
TOTAL		100	100	100	100

The incremental costs and benefits of the proposed project are summarised in the following incremental cost matrix. The incremental cost of the project is estimated to be \$US 34,972,000 of which \$US 1,452,000 is requested from GEF for supporting TA to facilitate private sector investment in RE sector by leveraging international climate finance.

Project Component	Baseline	Alternative	Increment
<i>Building national capacity for cross-sectoral engagement in the formulation and implementation of NAMAs</i>	<i>Continuation of existing institutional arrangements to address climate change, with a low level of awareness and knowledge on developing NAMAs.</i>	<i>A multi-sectoral institutional mechanism designed and endorsed to facilitate an integrated view & approach towards formulating a low carbon development pathway. The capacities are enhanced to analysis GHG emissions data, as well as, identify and develop NAMAs as well as programmatic approach to sectoral NAMA.</i>	<i>Technical assistance in developing and designing an institutional mechanism to coordinate the effort for development and implementation of low carbon development pathways, including capacities to identify and develop NAMAs.</i> <i>GEF cost: USD 350,000</i> <i>Global Environment Benefit: The GHG emissions due to growth and continued dependence on fossil fuel are likely to increase by 50% between 2010 and 2020. The creation on institutional and human capacities creates a potential for reducing emissions by 0.8 MtCO₂ through implementing RE and EE options in Energy Strategy</i>
<i>Component 2: Design & Implementation of pilot NAMA in the Energy Sector</i>	<i>The traditional approaches are used to develop and fund projects for RE. The private sector faces hurdles in investing in the RE sector due to policy/regulatory</i>	<i>Capabilities of MEPU, CEB, and private sector will be enhanced through formulation of wind energy NAMA and, formulation of programmatic utility-scale wind energy NAMA. Further, through creation of enabling environment private sector</i>	<i>Technical assistance in identifying policy, regulatory and administrative processes as well as develops these to facilitate faster and transparent decision making. Capacity developed in electricity sector for preparing and using NAMAs to leverage international climate finance to increase investment in RE.</i>

⁹ Ministry of Renewable Energy & Public Utilities. (2009). *Long-Term Energy Strategy 2009-2025*. GEF5 CEO Endorsement Template-February 2013.doc

	<i>bottlenecks.</i>	<i>investments of around 20 million USD will be facilitated. This will facilitate, both, awareness in RE industry and financing sector on financing NAMAs.</i>	<i>GEF Incremental Cost: 800,000</i> <i>Global Environment Benefit: The project is expected to facilitate up to 37.9 MW of wind capacity establishment. The annual carbon savings from 37.9 MW of wind capacity would approximately 61 ktCO₂ per annum. By 2020 Energy strategy expects a total capacity of 800 MW, of which wind will be 6%, i.e., 48 MW. Thus wind alone could result in emission reduction of approximately 84 ktCO₂ reductions per year in 2020.</i>
<i>Component3: Establishment of MRV system and national registry for NAMAs</i>	<i>There is no systemic system to monitor the implementation of mitigation actions.</i>	<i>The institutional framework, including organizational linkages, for MRV is established, including local capacities to undertake MRV. Practical example of MRV demonstrated through an energy system MRV plan development and its operationalization.</i>	<i>Technical assistance for capacity development on MRV as well as development of domestic MRV system.</i> <i>GEF incremental cost: 170,000</i> <i>Global Environment Benefit: The component doesn't directly lead to reduction in GHG emissions but contributes to UNFCCC requirement of MRV of NAMAs as well as by increasing the transparency of NAMA implementation it increases attractiveness of international climate funding.</i>

A.5.3 Global environmental Benefits (GEFTF)

In absence of sufficient resources and capacities to achieve the LTES plans, the project BAU emissions could increase to 5.3 MtCO₂ by 2020 from 3.58 MtCO₂ in 2010. A study¹⁰ simulated reductions in the absolute level of CO₂ emissions from implementation of energy strategy to be of the order of 0.8 MtCO₂ in 2020. Thus the project will enable create conditions for achieving these gains through accelerated implementation of the LTES.

Table 4 below shows the mitigation measures identified in the SNC study and their potential contribution to GHG emission reduction; a total estimate of 2, 516.80 Gg CO₂ for a twenty-year period (base year of 2010). This is currently being updated as part of the preparation of the Mauritius TNC. Under Component 1, more detailed studies will be conducted for selected sector/sub-sectoral mitigation measures to transform them into NAMAs, thereby ascertaining and making timelier the estimates of their contribution to global GHG emission reduction; as was done for wind energy under the TNA project.

Target Sector & Sub-sector Mitigation Measures	Total Projected GHG emissions reduction (Gg CO ₂)	
	2010 to 2020	2010 to 2020
Energy Generation		
a) Utility-Scale Wind Energy	221.00	415.00
b) Geothermal	-	282.00
c) Solar	18.00	172.00
d) Waste to Energy	118.00	153.00
d) Transmission Lines	22.00	33.00
TOTAL	357.00	1,022.00
Solid Waste Disposal		
a) Recycling	41.70	96.40
b) Composting	211.30	213.30

¹⁰ A.M. Bassi, P.N.K. Deenapanray and P. Davidsen (2013) *Energy policy planning for climate-resilient low-carbon development*, In Energy Policy Modeling for the 21st Century (Hassan Qudrat-Ullah, Ed.), Springer, NY, USA.

d) Incineration	580.00	581.70
e) LFG to Energy	383.40	417.00
TOTAL	621.90	615.80
Transport	252.00	400.00
a) Fuel Switching	3.00	9.00
b) Increase vehicle load factor	2.00	28.00
c) Improve inspection & maintenance	51.00	65.00
d) Improve technical efficiency	59.00	76.00
e) Improve system efficiency	137.00	222.00
TOTAL	252.00	400.00
Wastewater Handling		
a) Extension of Sewerage Network	79.00	113.00
b) Anaerobic treatment of Sugar Industry Waste	245.00	234.00
TOTAL	324.00	347.00
Net LULUCF		
a) Cropland to Forests	15.00	43.00
b) Afforestation/reforestation	63.00	89.00
TOTAL	78.00	132.00

Based on the 2012-13 study done under the TNA project, a 10-year programmatic approach on utility scale wind energy, (the baseline wind energy projects in the pilot NAMA projects to be implemented under this project), is expected to have a total cumulative reduction of 1,640,856 tCO₂ by 2025. Assuming that the target to 2025 does not change, and using the standardized baseline for the grid emission factor of 0.9661 tCO₂/MWh,¹¹ the cumulative emission reduction to 2025 has been updated to 1,076,346 tCO₂. The reduction is due to (1) delays in the implementation of wind energy projects, and (2) a decrease in the magnitude of the grid emission factor.

Two wind projects to be used as demonstration of NAMA will provide 37.9 MW of on-grid wind power totaling an annual production of 63.5 GWh/year. Using a grid emission factor of 0.9661 tCO₂/MWh, the corresponding annual emission reductions will be 0.061 MtCO₂/year. Assuming a technology lifetime of 20 years gives the cumulative emissions associated with the project as 1.23 MtCO₂. Since the baseline projects would most probably have taken place in the absence of the GEF project but with deficiencies such as delayed commissioning due to regulatory, technical and financial barriers, only 25% of these emission – i.e. 0.31 MtCO₂ – is attributed as direct GEF-induced emission reductions. The cost effectiveness of the project can be justified on the relatively low abatement cost of GEF US\$ 4.73 per tCO₂ avoided. The lifetime indirect emission reduction has been calculated as 613.4 ktCO₂ (bottom-up) or 352.1 ktCO₂ (top-down). With the completion of this GEF Project, all these mitigation measures shall become officially recognized Mauritius NAMAs, included in the international NAMA registry, and concretely contributing, on behalf of Mauritius, to the global GHG emission reduction efforts.

A.5.4 Sustainability and potential for scaling up

The concept of NAMAs as a means to engage non-Annex 1 countries in mitigation efforts is a central element in the UNFCCC discussions and negotiations, providing further stability to the project context. Therefore, the conceptual framework of the project is likely to be sustainable. NAMAs provide indeed a sound basis for translating mitigation strategy into implementation actions and will be a central instrument for implementing the NDCs in post-2020 regime.

The institutional sustainability will be reached by building-up capacities of all key national stakeholders and when possible developing the new processes on existing structures. The development of the institutional arrangements and processes for identifying, prioritizing, registering and monitoring NAMA's as well as the development of MRV system will involve key stakeholders from the different related-sectors including energy and include assessment parameters that are directly linked to national priorities and ongoing or planned programs. These processes will be structured, to the extent possible, within existing institutional frameworks rather than resorting to the creation of new committees.

¹¹ This is the of the standardized baseline emission factor for the national electricity system that was approved by the CDM Executive Board on 7 January 2016 (https://cdm.unfccc.int/filestorage/e/x/t/extfile-20160108170610437-G--SDM-Clean_Development_Mechanism_-CDM--CDM02-Methodology-Standardized_baseline-Approved_Standardized_Baselines_-ASBs-ASB00019_PSB0008-ASB0019.pdf/ASB0019.pdf?t=UHR8bzQ3OG82fDC1DGS7SHFJ3LX35RImeSs8 – accessed 17 March 2016).

With regards to NAMA identification, priority setting, and design process in the Energy sector, the project will undertake a sector assessment opportunities from the GHG abatement perspective, strengthening links to national development priorities and identifying cost effective opportunities for NAMA development. This process will define clear links between GHG reduction opportunities and national energy sector priorities, serving as a roadmap for all NAMA activities in the energy sector. GHG abatement measures will be linked to the government's ongoing procedures and programs, strengthening the mitigation aspects of these programs instead of developing new ones.

The establishment of priorities and definition on sector wide NAMAs is not expected to be a static process that established a rigid work plan. The project will create a framework in which the establishment of NAMAs is an ongoing and iterative process and can adapt to the country's changing circumstances. The process of establishing new NAMAs and adjusting the sector level strategy to achieve its goals should be fluid and allow for the incorporation of new experiences, changes in national conditions, and other unexpected circumstances. The project will seek to establish the conditions for such a continuous planning exercise to ensure that the relevance of the establish energy sector roadmap is maintained across time.

The pilot NAMA is linked to ongoing or planned government programs, strengthening their GHG emission reduction potential and their capacity to perform MRV. As this NAMA is aligned to national priorities, the project will mainstream its actions within a broader development context, which strongly favours sustainability.

With regards to scaling-up, capacity development program will be put in place to ensure that the technical capacities of all stakeholders are up to date. The pilot NAMA is designed to establish an enabling environment for private investments in RE through development of supportive policy and legislative instruments as well as adoption of financial tools and incentives. This should trigger the interest of private sector for RE in the country and foster the replication of such activities in Mauritius.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

The main identified risks to the successful implementation of the project include:

Risks	Rating	Mitigation Measures
Low political support for the NAMA	low	The National NAMA plan will be integrated in both the MID and relevant sectoral policies and strategies.
NAMAs not accepted by target sectors	low	Effective stakeholder involvement will be assured starting in the project formulation stage.
No availability of investments and funding for NAMAs	Medium	Respective ministries and agencies responsible of projects and investment activities which can be classified as NAMAs will propose inclusions of such projects and activities in either their budget allocations or investment plans or both.
Lack of support from International Donors	low	Country-driven and well-prepared proposals are submitted for external support. A good knowledge and understanding of the criteria used for external support is developed by the study team.
Climate Change risks (extreme weather events)	medium	Adaptation elements should be integrated in formulating/ designing the NAMAs
Supply of technology services (including expertise) and product are not adequately available locally.	medium	Local capacity building, complemented by identification of foreign expertise needed should be incorporated in the formulation of NAMA strategies. Market chains and linkages for mitigation technology products should be incorporated in the NAMA strategies.
Inadequate local capacity	medium	Local capacity building, including training, even potential for measures for local production should be incorporated in NAMA strategies.

The following are additional risks identified in the TNA Study for Wind Energy		
<p>Regulatory risk</p> <p>The setting up of the URA may be further delayed that would slow down the penetration of wind energy due to lack of transparency in the setting of electricity tariffs and contract negotiations;</p>	Low	Effective stakeholders' consultation should be assured by the energy ministry and the prime minister's office. As this will be facilitated within the MID process, such should be guaranteed.
<p>Financial risk</p> <p>The FiT scheme is predicated upon the availability of substantial amount of funding, and funding on a regular and timely basis. This is important in the context that guaranteed access to the grid will be granted for 15 years;</p>	Medium	Adequate local and foreign investments are the target of this project. If the barriers to investments identified in this document are addressed successfully by the project (e.g.; strengthening capacity of BOI, better market information with complete wind resource data, URA is in-place and operational), the financial risk should be minimized.
<p>Wind potential risk</p> <p>There is a risk that wind energy potential assessment is not completed or delayed in its implementation that would jeopardize site selection for wind farms;</p>	Low	This will be priority activity of the project and should be target for completion within the first one to one-a-half year period of the project
<p>Social risk</p> <p>Mauritius is a small island and there is a high likelihood that suitable wind farm sites may be close to communities, environmentally sensitive areas, have detrimental impacts on bird life; be seen to be aesthetically unpleasant, among others. Wide-scale communication campaigns will be necessary and communities must be engaged at the early stage of wind project development;</p>	Low	One of the activities of the project is creating public awareness about wind farms, particularly in the local communities where the projects will be installed.
<p>Technical risk</p> <p>There is a low risk that the technologies adopted by promoters do not respond well in the cyclonic conditions that may prevail over Mauritius periodically; and Operational risk: The penetration of wind energy is predicated upon the increase in base load power production in the network. The targets set for the penetration of wind energy to 2025 is therefore dependent upon the timely commissioning of other power generation units detailed in the Long-Term Energy Strategy 2009-2025.</p>	Low	This is already being addressed in the on-going design and equipment selection process of the wind farm projects.

A.7. Coordination with other relevant GEF financed initiatives

This project will built upon the outputs of Mauritius INDC (Intended Nationally Determined Contribution), the First Biennial Update Report and Third National Communications (TNC) to the UNFCCC. The last two are enabling activities that are currently being prepared by Mauritius with the assistance of UNEP. The most relevant outputs of the TNC are the greenhouse gas inventory and its preliminary assessment of mitigation options for the country. Other relevant GEF projects that can provide inputs to this project, particularly for Component 1 are; "CCM-UNDP: Removal of Barriers to Energy Efficiency and Energy Conservation in Buildings"; "CCM- UNDP: Removal of Barriers to Solar PV Generation"; "CCM-UNEP-Global Fuel Economy Initiative".

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

B.1.1 Institutional Arrangements for Project Implementation

Annex H includes diagrammatic representation of the Project Implementation Arrangement and detailed description of roles for the different participating stakeholders. The institutional arrangements for project implementation are summarized below.

The GEF Implementing Agency for the Project will be UNEP, while the Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM) will be the GEF Executing Agency.

UNEP DTU Partnership (UDP) is the co-executing agency of this project, and will support MoESDDBM in implementing the project.

A Project Steering Committee (PSC) will be established. It will be chaired by the National Project Director and made of representatives from the funding/co-funding agencies, senior representatives of relevant Government agencies and other key stakeholder (such as project developers, industries associations and NGOs), as appropriate.

A Project Management Unit (PMU) will be situated within the Climate Change Division of MoESDDBM in Port Louis.

Finally three component coordinators will be established under the leadership of the National Project Director.

B.1.2: Lead Key Stakeholders

The project will be located in the **Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)**, as the project is indeed primarily a capacity building project on NAMA. As focal point for the UNFCCC, the MOESDDBM is responsible for the coordination of NC, BUR, GHG Inventories as well as mitigation projects. The Director of Environment is also the DNA for CDM. The MOESDDBM will thus coordinate and lead the implementation of the project.

As such **MoESDDBM**, becomes the lead entity for this project. The *Climate Change Division (CCD)* under MoESDDBM is responsible for enabling activities related to the compliance with the reporting requirements of the UNFCCC, such as NATCOMs, BURs and now NAMAs. The *Project Management Unit*, headed by a Project Manager, will be based in the CCD of the MoESDDBM and will manage the day to day management and operation of the project.

The other important government stakeholders are the **Ministry of Energy and Public Utilities /Central Electricity Board (MEPU/CEB)** as they are responsible for the management of the electricity sector, and **Statistic Mauritius**, which is responsible for managing the data collection and management. It has to be noted however that the MEPU and CEB will be responsible for the execution of the Energy NAMA and for the development of an MRV system for the power sector (under components 2 and 3 of the project). *As key project stakeholders, these entities will be the leading members of the Project Steering Committee.*

Table 4 below outlines the key responsibilities of the three key stakeholders. Three technical working groups will manage the technical work of the three components of the project. Each of the working group will be led by the above three ministries.

Lead Key Stakeholders	
Institution	Roles and Responsibility
Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)	<ul style="list-style-type: none">• The Ministry is the National Focal Point for Climate Change• Holds the Climate Change Division and the National Climate Change Information Centre, as well as the Integrated Coastal Zone Management division The Climate Change Division is responsible for:

	<ul style="list-style-type: none"> - Coordination of National Communications and biennial update report under the UNFCCC - Coordinating preparation of GHG inventory preparation - Development, coordination and implementation of mitigation policies, programmes, and initiatives. Under this responsibility the Director of Environment is the Designated National Authority for CDM. - In context of coordinating mitigation actions and focal point for UNFCCC, for communicating to the UNFCCC NAMA registry <p>The Ministry is the lead entity and will be responsible to coordinate the implementation of the GEF-financed, UNEP-implemented project and it will also host the Project Management Unit (PMU).</p>
Ministry of Energy and Public Utilities/ Central Electricity Board (MEPU/CEB)	<ul style="list-style-type: none"> • The Ministry is responsible for formulating policies in the energy, water and wastewater sectors and the establishment of a responsive legal framework to govern the development of these sectors. • The Ministry has under its responsibility the Central Water Authority (CWA), the Central Electricity Board, the Wastewater Management Authority, the Water Resources Unit, the Energy Efficiency Management Office (EEMO) and the Radiation Protection Authority. • CEB is mandated to "prepare and carry out development schemes with the general object of promoting, coordinating and improving the generation, transmission, distribution and sale of electricity" in Mauritius. It is responsible for: <ul style="list-style-type: none"> ○ the use and benefits of indigenous renewable sources of energy; and, to promote energy conservation among other responsibilities. ○ will be the lead agency in carrying out the GHG inventory of the energy industries ○ Will be responsible for formulating electricity NAMA and up-scaling/replication of NAMA • The Ministry will Chair the Technical Working Group on Wind Energy NAMA, and it will be closely involved in the design and development of an MRV system for the power sector.
Statistics Mauritius (SM)	<ul style="list-style-type: none"> • The role of SM will be to provide access to timely and high quality statistical data for carrying our inventory, mitigation and adaptation analyses, as well as data for MRV of NAMAs; • It is also a key institution for the successful implementation of BUR on a biennial period, as well as institutionalizing the relevant and appropriate IPCC guidelines and methodologies for inventory statistical data analyses • Statistics Mauritius will be directly involved in the design and management of the MRV systems that will be developed under the project

B.1.3: Other Key Stakeholders

Other key stakeholders include UNEP, UDP the project developers. They will join the lead key stakeholders (discussed above) in the **Project Steering Committee**.

UNEP is the GEF implementing agency.

Project Developers, mainly from the private sector, are included among the key stakeholders. These are **Aerowatt Mauritius Ltd** and **Consortium Suzlon Padgreen Co Ltd**, who will be implementing 8.65 MW and 29.4 MW grid-connected wind farm respectively.

UNEP- DTU Partnership (UDP) - UDP is the co- Executing Agency of this project, and will support MoESDDBM, the EA, in implementing the project. UDP, formerly known as the UNEP Risoe Centre established in 1990, is a UNEP collaborating centre which operates under a tripartite agreement between the Danish Ministry of Foreign affairs, UNEP, and the technical university of Denmark (DTU). It is a leading international research and advisory institution on climate, energy and sustainable development. UDP has extensive experience working with NAMAs, having already received international recognition for its work on Clean Development Mechanisms (CDM). The partnership is currently conducting the Facilitating Implementation and Readiness for Mitigation (FIRM) project on behalf of UNEP, which seeks to support nine countries in the development of NAMAs and Low Carbon Development Strategies, and not least, assist in overcoming financial barriers for implementation. UDP is currently facilitating the Adaptation Mitigation Readiness (ADMIRE) project which provides international climate change mitigation and adaptation expertise and technical assistance for proponents to develop finance-ready NAMAs by creating pathways for private sector involvement. In the project UDP will be responsible for:

- Ensuring primary technical back-stop of the project;
- Leading international technical expertise for the implementation of the project and providing expertise on:
 - Development of NAMA prioritization and identification framework as well as development of national NAMA registry;
 - Development of Wind Energy NAMA;
 - Development of domestic MRV system; and
 - Capacity development on NAMAs.
- Facilitating identification and hiring of specific international expertise for the three components of the project.

UDP will be directly contracted by UNEP and manage the funds for the GoM.

B.1.4: Other Stakeholders

The implementation of the project has an impact on a larger section of society than the three Ministry mentioned above. Table below outlines some of the wider stakeholders from the government.

Institution	Roles and Responsibility
Prime Minister's Office (PMO)	The PMO has several specialized institutions that deal with various aspects of climate change operating under its aegis.
MARENA (Mauritius renewable energy agency)	<p>The objects of the Agency is:</p> <ul style="list-style-type: none"> • To promote the adoption and use of renewable energy with a view to achieving sustainable development goals; • Advise on possible uses of liquid natural gas; • Create an enabling environment for the development of renewable energy; • Increase the share of renewable energy in the national energy mix; • Share information and experience on renewable energy research and technology; and • Foster collaboration and networking, at regional and international levels, with institutions promoting renewable energy.
Mauritius Meteorological Services (MMS)	<ul style="list-style-type: none"> • National institution responsible for generating, analysing, communicating and disseminating meteorological data and information in ROM • MMS hosts early warning systems for extreme weather events like cyclones, torrential rain, high waves and tsunamis, among others • Because of its cross-cutting and cross-sectoral attribute, the MMS is a stakeholder in all sectoral and cross-sectoral vulnerability assessments • The MMS is the key stakeholder in weather and climate observations, and it is also involved in climate modelling and projections • The MMS is responsible for day-to-day forecast for the general public of the Republic of Mauritius as well as for aviation and marine industry • Rodrigues has been the first island under the Republic of Mauritius to generate on-grid wind energy. Hence, it will be covered under the Wind Energy NAMA component of the project. • The MMS has meteorological data that can be used to carry out wind resources assessments.
Ministry of Finance and Economic Development (MoFED)	<ul style="list-style-type: none"> • The Ministry is responsible for budgetary allocations and to coordinate the interventions of development partners • National GEF Operational Focal Point • Line ministry for channelling all regional and international climate finance • MoEFD will be regularly involved in consulting on developing policy and regulatory framework from promoting RE, especially regarding the financial implications. Further, it shall also be consulted on regularly for developing a coordinating mechanism for providing access to international financial resources for RE. • MoEFD is will be involved in component 1; on developing institutional arrangements for NAMA coordination and implementation, specifically on coordination of international financing of NAMAs with internal resource allocations.
Ministry of Housing and Lands (MoHL)	<ul style="list-style-type: none"> • Responsible for planning the physical development of the territory • This implies mainstreaming aspects of CCA and DRR in land use planning and physical development • The Ministry also has a repertory of population demographics and geospatial information on physical infrastructure • It has key competencies in geospatial modelling tools and methodologies like GIS • The Ministry is also a key stakeholder in developing and identifying land resources for siting

<ul style="list-style-type: none"> • Tertiary Institutions (e.g. University of Mauritius) • Mauritius Research Council (MRC) 	<p>RE projects. It will be consulted on development of potential sites for RE projects.</p> <ul style="list-style-type: none"> • The Ministry has the vision to transform Mauritius into a Knowledge Based Economy by 2022 • To do this, it seeks to expand the Tertiary Education sector to increase access, further enhance Quality and promote Research, Science and Technology to increase the competitiveness of Mauritius • Tertiary institutions already carry out research on climate change • The Mauritius Research Council funds research that also covers climate change • The MRC is currently involved in carrying out feasibility studies for the generation of renewable electricity using ocean and marine resources, including off-shore wind energy. MRC will benefit from the project since the component on wind energy NAMA could be replicated to cover ocean renewable energies. This is important as Mauritius gears up to develop an Ocean Economy.
<p>Ministry of Gender Equality, Child Development and Family Welfare (MoGECDFW).</p>	<ul style="list-style-type: none"> • The Ministry carries out sensitisation campaigns related to climate change adaptation and mitigation, with special focus on gender-differentiated impacts of CC • The Ministry will play an important role in supporting the mainstreaming of gender in renewable energies.

Stakeholders representing industry/private sector, civil society, and research organizations too will be involved in activities of the project using appropriate mechanisms and channels. Direct consultations, specific workshops, and associated public awareness raising and training are envisaged to be the main channels for the involvement of these stakeholders. They also include local and international financing sources other than the project developers, as they are important stakeholders by virtue of facilitating investments flows and providing investment resources. These stakeholders will also be represented in the Project Steering Committee (PSC).

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

NAMA and Sustainable Development

The programme will foremost build capacity among the government officials to develop and implement NAMAs in context of achieving sustainable development through local carbon growth paths. The sustainable development strategy of Mauritius identifies energy as the key driver of economic growth and also a key factor in stability of balance of trade. Energy is also the biggest source of GHG emissions in the economy. Thus NAMA development and implementation capacity will enhance not only benefits for climate change but also sustainable development in the country.

The key stakeholders in NAMA awareness and capacity development are the Government agencies and departments. The capacity building activities on NAMA identification, prioritization, development and implementation will cover all the key ministries as well as local authorities. Further, these entities will be part of awareness generation on MRV aspects of NAMA and capacity building on measurement of relevant data for tracking progress and implementation of NAMAs.

NAMA capacity development activities will focus on non-government stakeholders covering universities and research organizations, industry associations, as well as financial sector. The objective of the awareness raising activities is familiarize the non-government stakeholder in the NAMA concept as well as initiate capacity development in these organizations to sustain the capacities within country on support NAMA development and implementation. Universities and research organization would play an important role for transferring NAMA knowledge to country stakeholders. Similarly private sector engagement in NAMAs is important and, hence, capacities will develop in private sector entities to enable their effective participation in NAMA development and implementation.

Reducing dependence on imported energy supply

A major component of the programme is to develop NAMA for energy sector and demonstration its application in the wind based renewable energy. Mauritius is an island state and depends on imports for all its energy needs. Renewable energy in context of Mauritius is key to reducing its dependence on imported energy and increasing energy security. Further, use of renewable energy will reduce dependence on fossil fuel based energy and its related impacts on air pollution and water resource requirements. Water is a scarce resource in Mauritius and coal based power plants as well as those based on diesel/petroleum requires substantial amount of water to produce electricity compared to renewable energy plants.

The programme is aimed at enhancing private sector investment in the Mauritius economy. The Energy NAMA is aimed to increasing conditions for private sector participation in the energy sector. This will increase jobs both in the financial sector as well as in the energy projects and ancillary jobs for supporting renewable energy. Further, enhancing private sector conducive environment is expected to enhance private sector investments in the economy in general thus enhancing development.

The project will also focus on capacity development of local financial institution on understanding the concept of NAMAs, carbon finance, as well as, and financing RE projects. Local financial institutions are key to sustaining investments in RE and their capacities to leverage international concessional source of finance, specifically carbon finance, including the GCF.

NAMA in energy sector will also enable greater installed capacity of solar energy in the Republic of Mauritius, and the resultant benefits. Decentralized solar energy has immense benefits, both, in job creation as well as reducing energy bills of the households. Further, enhanced energy access, especially renewable energy address gender concerns through alleviating effort required in many developing countries on fuel collection and also adverse health impacts of traditional fuels.

Mainstreaming Gender

The design of the policies, regulations and NAMAs will take into account gender aspects and impacts. The project will utilize the tools and methodologies that have been developed by ENERGIA (The International Network on Gender and Sustainable Energy). They have on their website "Mainstreaming Gender in Energy Projects Knowledge Products" (e.g.; "Mainstreaming Gender in Energy Projects: A Practical Handbook"; "Gender and Energy for Sustainable Development: A Toolkit and Resource Guide"; "Strengthening Gender Mainstreaming in Environment and Energy Policies") which can be used by the project and list of resource persons whom this project can tapped (<http://energia.org/>). A Gender consultant will be hired by the project (a cost of USD 10,000 is allocated for this task) to ensure gender issues are well integrated into the activities and outputs of the project.

B.3. Explain how cost-effectiveness is reflected in the project design:

The first element of cost-effectiveness arises from targeting energy generation from renewable energy which has both implications for sustainable growth and development as well as limiting GHG emissions. Mauritius is experiencing rapid growth and thus will result in substantial energy demand increase in the future. Mauritius is depended on imported fuels to meet its energy demands and thus increasing energy demand would result in increased imports having an implication on its growth potential. The project aims to create an enabling framework and capacities for tools to attract private sector finance and international climate finance, which will enable a rapid shift to RE.

Secondly, the project builds on this foundation of political intent in the country to increase the use of RE, as outlined by the long term energy strategy of the Government. The focus of the project is to increase the participation of private sector in renewable energy generation through enabling environment, facilitating access to international climate finances as well as other source of RE finance, and involving all the key stakeholders who have a stake in the process of transformation. The project will address the key challenges of process for identifying and accessing land for RE projects, administrative approval simplifications for approved projects, as well as involving the national and international financial sector in creating awareness on the RE potential. These will have a multiplier effect through attracting private sector investments to meet the national target of 35%

energy from renewable energy sources.

Lastly, the project takes advantage of existing efforts and activities by the national government, partners, and the global partners. Through this cooperation, the project will bring together the national efforts with international climate finance and RE sources to enable attractiveness of renewable and thus greater investments. The project also by creating an MRV framework and capacities to implement MRV increases the capacities to attract international climate finance in promoting national sustainable development objective.

C. DESCRIBE THE BUDGETED M & E PLAN: Please refer to Annex G.


PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Dharam Dev MANRAJ	Financial Secretary	MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT GROUND FLOOR, OLD GOVERNMENT CENTRE PORT LOUIS, MAURITIUS TEL:+ 230 201 1146 FAX:+ 230 211 0096 EMAIL:DDMANRAJ@GOVMU.ORG, FSSECRETARIAT@GOVMU.ORG	

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Brennan Van Dyke Director, GEF Coordination Office, UNEP		May 30, 2016	CONRADO S. HERUELA, TASK MANAGER	+6622881202	conrado.heruela@unep.org

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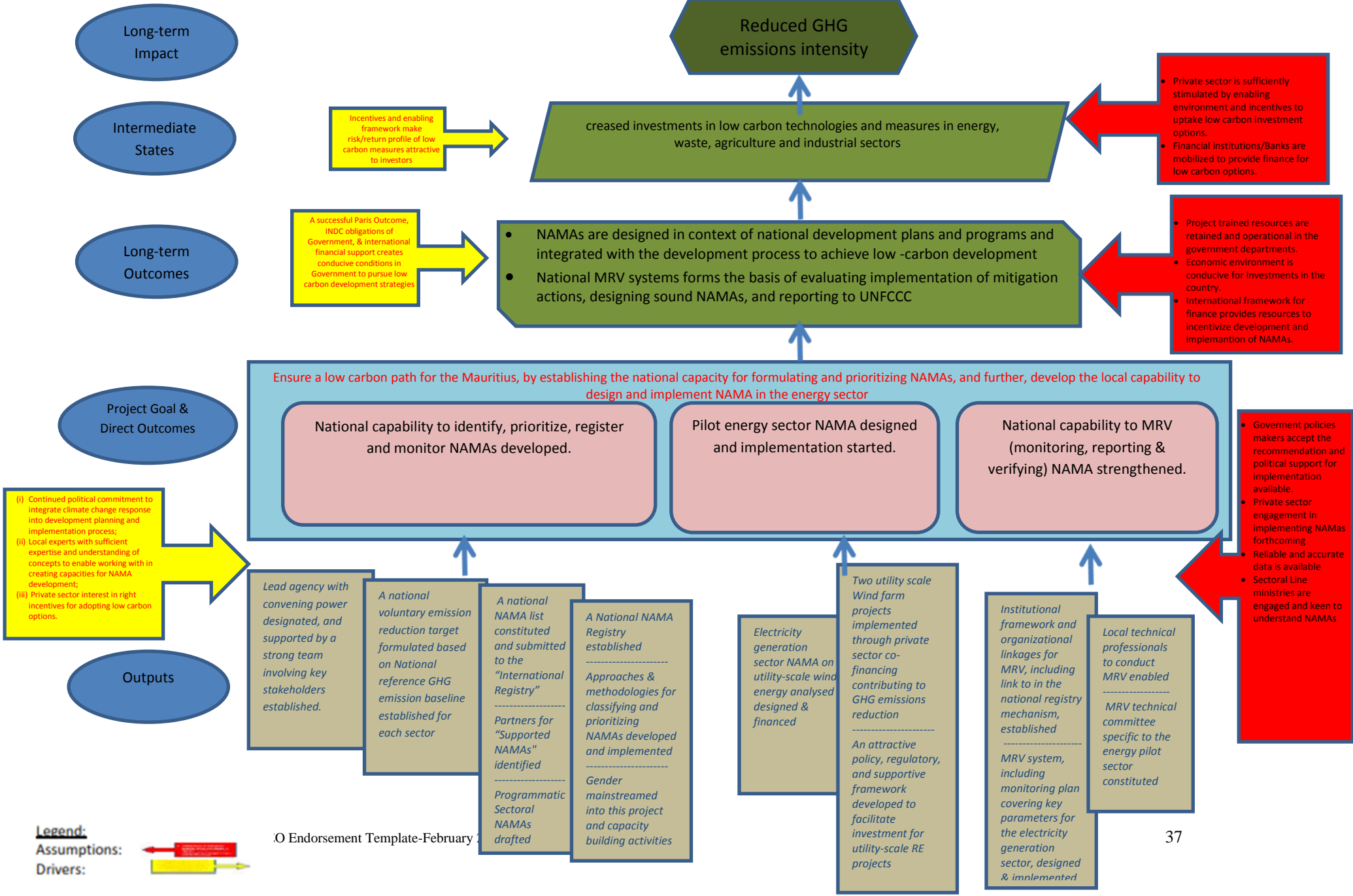
Annex A-1.	Project results framework
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Appendix 7:	TORs of Project Personnel

ANNEX A-1: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Project Objective	Objective level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions	UNEP MTS reference*
<i>To ensure a low carbon path for the Mauritius, by establishing the national capacity for formulating and prioritizing NAMAs, particularly those found in “MID”, and further, develop the local capability to design and implement NAMA in the energy sector</i>	<i># of NAMA ideas listed in the National NAMA Registry</i>	0 <i>No NAMA idea is likely to be identified in absence of capacities and no NAMA registry is likely to be established</i>	MPT: 5 EoP:5	<i>National NAMA Registry</i>	<i>Sectoral Line Ministries cooperate and contribute to information sharing</i>	Subprogramme 1: Climate Change
Component 1: Building national capacity for cross-sectoral engagement in the formulation and implementation of NAMAs						
Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment
Project Outcome 1: <i>National Capability to identify, prioritize register and monitor NAMA's developed</i>	<i># of NAMA document developed</i> <i># Programmatic NAMA concepts identified in different sectors</i>	0 <i>In absence of capacities to identify NAMAs, it is unlikely that without any external support NAMAs would be developed</i> 0 <i>In absence of capacities to develop Programmatic NAMA, it is unlikely that without any external support Programmatic NAMAs would be developed</i>	2 1	<i>NAMAs</i> <i>Terminal Project report documents</i>	<i>Continued Government commitment to address climate change</i> <i>Continued Government support for integrating climate change in development planning and implementation</i> <i>Continued Government support for integrating climate change in development planning and implementation</i>	POW 2016-2017: EA (b): “Energy efficiency is improved and the use of renewable energy is increased in partner countries to help reduce greenhouse gas emissions and other pollutants as part of their low-emission development”; Indicator (ii): “Increased percentage of countries meeting energy efficiency standards in specific sectors, with support from UNEP.”

Component 2: Design & Implementation of pilot NAMA in the Energy Sector						
Project Outcome 2: Pilot energy sector NAMA designed and implementation started	<i>Pilot NAMA registered on UNFCCC website</i>	<i>0 There are no NAMA development activities currently in energy sector. The project will support preparation of the NAMA</i>	<i>MPT: 0 EoP: 1</i>	<i>UNFCCC NAMA Registry</i>	<i>Strong support and buy - in from the private sector Economic environment in Mauritius is conducive for investments in energy sector. Continued Government support for increased use of renewable energy Financial institutions/Banks are interested in engaging in financing renewable energy Persons with a minimum skill level are available to be trained as technicians for wind projects</i>	<i>POW 2016-2017: EA (b): “Energy efficiency is improved and the use of renewable energy is increased in partner countries to help reduce greenhouse gas emissions and other pollutants as part of their low-emission development”; Indicator (ii): “Increased percentage of countries meeting energy efficiency standards in specific sectors, with support from UNEP.” POW 3 & 5</i>
Component 3: Establishment of MRV system and national registry for NAMAs						
Project Outcome 3: Establishment of MRV system and national registry for NAMAs	<i># of MRV reports for NAMA uploaded on the NAMA National Registry</i>	<i>0</i>	<i>MPT:0 EoP:2</i>	<i>National NAMA Registry Website</i>	<i>Continued support of Government for operating the domestic MRV System. Continued support of Government to meet its international commitments.</i>	<i>POW 2016-2017: EA (b): “Energy efficiency is improved and the use of renewable energy is increased in partner countries to help reduce greenhouse gas emissions and other pollutants as part of their low-emission development”; Indicator (ii): “Increased percentage of countries meeting energy efficiency standards in specific sectors, with support from UNEP.” POW 3 & 5</i>

ANNEX A-2: THEORY OF CHANGE



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

Items to Consider at the CEO Approval Stage:	Agency's Response
1. The detailed estimate (with methodology) for DIRECT and INDIRECT (incl. post-project) GHG emission reductions for the pilot NAMA implementation project.	The new NAMA's project pipeline that will lead to investment in the future have not been identified, this is a project activity and therefore it is not yet possible to report on emissions reduction. Once they have been identified, the methodologies to be used will be based on guidelines provided by UNFCCC and the IPCC, see link below. http://unfccc.int/files/national_reports/annex_i_natcom/application/pdf/non-annex_i_mrv_handbook.pdf For the 2 wind projects planned under component 2, the direct cumulative emissions associated are 1.61MtCO ₂ during their lifetime, 0.31 MtCO ₂ is attributed to the GEF (25% causality factor). Please refer to section A.5.3.
2. Section A.1.3. Activity 1.3 and 1.4: The selection of sub-/sectoral NAMA based on mitigation potential will be identified to introduce a programmatic approach. Additionally, please consider exploring carbon finance options for potential sector(s) such as LULUCF.	See Component 1, Output 1.5. It was decided to drop the LULUCF sector as one of the focus sector of this project. Instead, all sectors will be again reviewed, and new priority sectors will be selected for which programmatic NAMAs will be drafted/
3. Updated and detailed implementation plan for wind energy projects based on the upcoming revision of the national sustainable energy strategy	The updates are incorporated in the discussion of the project baseline.
4. Table B: Please consider reallocation of Project Management Cost for the co-financing to the same proportion equivalent to the GEF project funding i.e. 10%	The stakeholders were requested to recalculate their PMC and the estimates for the PMC have been increased to USD 75,000, see table B and co-financing budget (Annex F-2).
List of deliverable with CEO approval request on supported NAMA includes the following:	
1. Entry to the UNFCCC NAMA Registry Portal, including GEF support for the project.	Application as "Supported NAMA" to the NAMA Registry Portal has been submitted. A follow-up will be made as soon as the CEO Approval Request is obtained
2. Submission of final co-financing letters as applicable including GEF agency.	All LoC submitted, See Annex L
3. Duly filled CCM tracking tool	Done, see Annex M

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS¹²

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: US\$50,000			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Local consultant services	10,000	10,000	
International consultant services	30,000	30,000	
Operation and Administrative cost for local government stakeholders' consultation	10,000	10,000	
Total	50,000	50,000	

¹² If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

Not Applicable

ANNEX E-1: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF/LDCF/SCCF RESOURCES

<i>Position Titles</i>	<i>\$/ Person Week*</i>	<i>Estimated Person Weeks**</i>	<i>Tasks To Be Performed</i>
For Technical Assistance			
<i>Local</i>			
Statistical Expert	500	60	Supports the MRV related work across component 2 and 3; Supports the assessment of existing M&E system and data collection arrangements for development of a national MRV system including the analysis of the institutional framework. Supports development of a monitoring plan for pilot NAMAs. Support collection of national and sectoral data for components 2 of the project and in particular on: national socio-economic data; sectoral data for renewable energy; Support implementation of component 3 of the project and in particular: provide inputs on the data collecting approaches for MRV of NAMAs;
Data collection and GHG modelling expert	500	40	Support the implementation of components 1 of the project; Develop GHG inventory according to IPCC guidelines and provide inputs for the development of National GHG emission data base; Support development of baselines for Develop baseline and mitigation assessment for sectors to establish voluntary targets; Support development of MAC curve for mitigation options.
Sectoral expert for programmatic approach	500	40	Support the implementation of component 1 and 3 of the project and in particular:
		10	a) Analyze the current national framework (policy, regulation and financial/economic) related to RE investments; Analyze the existing institutional framework related to climate change and LCDS;
		10	b) Provide inputs for the development of the multi-sectoral institutional mechanism and for the development of a the lead agency (including its role) responsible for NAMA issue;
		10	c) Provide inputs for the development of programmatic approach to sectoral NAMA;
		10	d) Provide ideas and inputs for the development of a national MRV system including the development of a monitoring plan.

Finance expert	500	40	<p>Support the financial analysis related to component 2 of the project and in particular:</p> <ul style="list-style-type: none"> Develop economic feasibility study and cost-benefits analysis for wind technology; develop economic feasibility study and cost-benefits analysis for other RE technologies upon request (selected for NAMA ideas development); Assessment of financial incentives in country to promote RE, the gaps and recommendations for addressing the gaps; Assessment of challenges of financial lending sector in the country to RE and prepare recommendations to address the challenges; Develop financial scheme including new financial mechanism and arrangements for the development and diffusion of wind technologies and other RE technologies; Propose economic tools as incentives for public and private investments for RE; Interact with national and international public and private financial actors.
Renewable Energy Expert	500	100	<p>Support the implementation of component 2 of the project and in particular:</p> <ul style="list-style-type: none"> Provide technical inputs on wind technology during the development of the wind NAMA; Overview all technical tasks related to wind technology during the implementation of the Wind NAMA; Assess the technical capacity within country and gaps in implementing RE technologies; Provide technical inputs on RE technologies during the development of the RE NAMA ideas; Contribute to the analysis of the existing framework related to the diffusion and implementation of RE technologies.
Gender Consultant	500	20	<p>Will be responsible for mainstreaming gender into the project. Mainstreaming gender concerns in energy projects makes the gender dimension explicit in all phases of the project cycle</p>
<i>International : Non.</i>			
<p>Justification for travel, if any: The budget of 7500 USD for international travels will be used to cover the travelling costs of the project management staff to attend one or two international workshops or conferences in order to diffuse the project results internationally.</p>			

ANNEX E-2: TERMS OF REFERENCE FOR CONSULTANTS

TITLE: FINANCE EXPERT

- **Duration:** 40 weeks
- **Date Required:** end of year 1, years 2 and 3
- **Duty station:** Mauritius
- **Counterpart:** Ministry of Environment, Sustainable Development, Disasters and Beach Management, (MoESDDBM)
- **Background:** The Finance expert will support the finance related work across component 2 of the project. In its component 2, the project aims at designing & implementing a pilot NAMA in the energy sector (wind energy NAMA). For this work, a financial schemes should be developed during the development phase of the NAMA and then implemented in order to achieve the investments needed for the financial sustainability of the action.
- **Expected Outcomes and deliverables**
 - Key deliverables are as follow:
 - economic feasibility study and cost-benefits analysis for wind technology
 - economic feasibility study and cost-benefits analysis for other RE technologies upon request (selected for NAMA ideas development)
 - report on assessment of financial incentives in country to promote RE, the gaps and recommendations for addressing the gaps
 - report on assessment of challenges of financial lending sector in the country to RE and prepare recommendations to address the challenges
 - Development of a financial scheme including new financial mechanism and arrangements for the development and diffusion of wind technologies and other RE technologies
 - report on economic tools as incentives for public and private investments for RE
 - Interactions with national and international public and private financial actors
- **Reporting structure** - The Finance expert will work under the general supervision of the coordinators in charge of component 2 implementation, and report to the person responsible for Project Manager at the co-operating entity.
- **Qualifications**
- Minimum of University degree in and post-graduate Masters Degree in finance
- Minimum 12 years experience in finance related work on technologies
- Extensive knowledge of RE and wind energy sector, regulation and reform, energy policy and electricity production issues in Mauritius
- Demonstrated experiences with cost-benefits analysis
- Extensive knowledge and demonstrated experiences on NAMA concept
- Knowledge and experience in working with government institutions in Mauritius and in particular with energy sector
- Adequate computer literacy.
- **Languages:** Fluent in English (speaking and writing)

TITLE: DATA COLLECTION AND GHG MODELLING EXPERT

- **Duration:** 40 weeks
- **Date Required:** second half of year 1 and year 2
- **Duty station:** Mauritius
- **Counterpart:** Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)
- **Background:** The Data collection and GHG modelling expert will support the implementation of components 1 of the project. In its component 1, the project aims at building national capacity for cross-sectoral engagement in the formulation and implementation of NAMAs. This includes setting up institutional arrangements and technical knowledge to develop GHG inventory, as well as identifying mitigation opportunities in the different sectors.
- **Expected Outcomes and deliverables**
 - Key deliverables are as follow:
 - GHG inventory according to IPCC guidelines
 - inputs for the development of National GHG emission data base
 - report on baseline development and mitigation assessment for sectors to establish voluntary targets
 - development of MAC curve for mitigation options.

- **Reporting structure** - The Data collection and GHG modelling expert will work under the general supervision of the coordinators in charge of component 1, and report to the person responsible for Project Manager at the co-operating entity.
- **Qualifications**
 - Minimum of University degree in Engineering and post-graduate Masters Degree
 - Minimum 12 years experience in developing GHG inventory
 - Extensive knowledge of IPCC guidelines
 - Extensive knowledge of mitigation national and sectoral contexts
 - Familiar with the development of MAC curves and related analysis
 - Good knowledge on NAMA and MRV concepts
 - Knowledge and experience in working with government institutions in Mauritius and in particular with energy sector
 - Adequate computer literacy.
- **Languages:** Fluent in English (speaking and writing)

TITLE: SECTORAL EXPERT FOR PROGRAMMATIC APPROACH

- **Duration:** 40 weeks
- **Date Required:** year 1 and year 2 of the project
- **Duty station:** Mauritius
- **Counterpart:** Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)
- **Background:** The Sectoral expert for programmatic approach will support the implementation of components 1 and 3 of the project. In its component 1, the project aims at building national capacity for cross-sectoral engagement in the formulation and implementation of NAMAs. This includes setting up institutional arrangements to manage the NAMA issue in Mauritius. In its component 3, the project aims at establishing a national MRV system. For this work, a clear understanding of the national and sectoral institutional arrangements existing for data collection is needed to be able to build the new MRV system on the existing structures.
- **Expected Outcomes and deliverables.**
- Key deliverables are as follow:
 - report on analysis of current national framework (policy, regulation and financial/economic) related to RE investments
 - report on analysis of existing institutional framework related to climate change and LCDS
 - inputs for the development of the multi-sectoral institutional mechanism and for the development of a the lead agency (including its role) responsible for NAMA issue
 - inputs for the development of programmatic approach to sectoral NAMA;
 - inputs for the development of a national MRV system including the development of a monitoring plan
- **Reporting structure:** The Sectoral expert for programmatic approach will work under the general supervision of the coordinators in charge of components 1 and 3 implementation, and report to the person responsible for Project Manager at the co-operating entity.
- **Qualifications**
 - Minimum of University and post-graduate Masters Degree in relevant area
 - Minimum 12 years experience in work related to institutional arrangements for climate change including data collection aspects
 - Extensive knowledge of climate change issue including existing institutional arrangements in Mauritius
 - Good knowledge of energy sector, regulation and reform, energy policy and electricity production issues in Mauritius
 - Extensive knowledge and demonstrated experiences on NAMA and MRV concepts
 - Knowledge and experience in working with government institutions in Mauritius
 - Adequate computer literacy.
- **Languages:** Fluent in English (speaking and writing)

TITLE: RENEWABLE ENERGY EXPERT

- **Duration:** 100 weeks
- **Date Required:** from end of year 1 to end of project implementation
- **Duty station:** Mauritius
- **Counterpart:** Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)
- **Background:** The Renewable Energy expert will support the implementation of component 2 of the project. In its component 2, the project aims at designing & implementing a pilot NAMA in the energy sector (wind energy NAMA). For this work, technical knowledge on wind energy technology as well as deep understanding of the RE policy and regulation context are necessary during the development and the implementation of the pilot NAMA.
- **Expected Outcomes and deliverables**

- Key deliverables are as follow:
- inputs on wind technology during the development of the wind NAMA
- Overview of all technical tasks related to wind technology during the implementation of the Wind NAMA
- report on assessment of technical capacity within country and gaps in implementing RE technologies
- technical inputs on RE technologies during the development of the RE NAMA ideas
- report on analysis of existing framework related to the diffusion and implementation of RE technologies
- **Reporting structure** - The Renewable Energy expert will work under the general supervision of the coordinators in charge of component 2, and report to the person responsible for Project Manager at the co-operating entity.
- **Qualifications**
 - Minimum of University degree in Engineering and post-graduate Masters Degree
 - Minimum 12 years experience in RE sector, with emphasis on wind technology
 - Extensive knowledge of RE energy sector, regulation and reform, energy policy and electricity production issues in Mauritius
 - Extensive knowledge and demonstrated experiences on NAMA and MRV concepts
 - Knowledge and experience in working with government institutions in Mauritius and in particular with energy sector
 - Adequate computer literacy.
- **Languages:** Fluent in English (speaking and writing)

TITLE: STATISTICAL EXPERT

- **Duration:** 60 weeks
- **Date Required:** from end of year 1 to end of project implementation
- **Duty station:** Mauritius
- **Counterpart:** Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)
- **Background:** The Statistical expert will support the MRV related work across components 2 and 3 of the project. In its component 2, the project aims at designing & implementing a pilot NAMA in the energy sector (wind energy NAMA). For this work, a MRV system will have to be developed and implemented at NAMA level. This includes the development of a monitoring plan as well as setting up the institutional arrangements for the data collection, reporting and verification of the NAMA MRV system. In its component 3, the project aims at establishing a national MRV system. For this work, a clear understanding of the national and sectoral institutional arrangements existing for data collection is needed to be able to build the new MRV system on the existing structures.
- **Expected Outcomes and deliverables:**
- Key deliverables are as follow:
 - report on assessment of existing M&E system and data collection arrangements at national level and in the different sectors, including analysis of institutional framework
 - monitoring plan for the pilot NAMAs including the following elements:
 - *What* information and data to collect?
 - *How* to collect information and data? - direct measurement, survey, secondary sources of information
 - *Who* is responsible for collecting information and data?
 - *When* - frequency of measure
 - *How long* to store and how to store the information and data (electronically, paper trail, etc)
 - *QA & QC* procedures - to ensure quality of data
 - periodic reports on national data during the implementation of the wind energy NAMA, including (but not limited) national socio-economic data; sectoral data for renewable energy
 - report on data collecting approaches for the development of options for domestic MRV System
 - inputs on monitoring plan for the Electricity Generation Sector
- **Reporting structure:** The Statistical expert will work under the general supervision of the coordinators in charge of components 2 and 3 implementation, and report to the person responsible for Project Manager at the co-operating entity.
- **Qualifications:**
 - Minimum of University degree in Engineering and post-graduate Masters Degree
 - Minimum 12 years experience in data management and 7 years in data management for the energy sector
 - Extensive knowledge of wind energy sector, regulation and reform, energy policy and electricity production issues in Mauritius
 - Extensive knowledge and demonstrated experiences on NAMA and MRV concepts
 - Knowledge and experience in working with government institutions in Mauritius and in particular with energy sector
 - Adequate computer literacy.
- **Languages:** Fluent in English (speaking and writing)

TITLE: GENDER EXPERT

- Mainstreaming gender concerns in energy projects makes the gender dimension explicit in all phases of the project cycle. A gender mainstreaming approach does not look at women in isolation, but looks at women and men together – both as actors in the energy sector, and as its beneficiaries. This process ensures that both women and men will be able to benefit from energy projects, and gender inequality in project activities and outcomes will be reduced or eliminated.
- **Tasks of Gender Consultant** - The work will mostly involve literature review and desk research. It will also involve interview and consultations with key information sources. From these sources of data and information, the consultant will perform the following tasks:
 - Country Context Review – Mapping the gender and energy situation in the country
 - Project Document Review – Understanding the project’s starting point on gender issues
 - Organisational Assessment - Assessing the capacity of the energy project to mainstream gender
 - Facilitate Stakeholder Consultations – Understanding the gender and energy situation in the field
 - Design Gender Action Plan (GAP)

- **Deliverables and Schedule of Consultancy Work**

Deliverables	Target Dates
Preliminary Report (Tasks 1-3) & preparation of draft GAP	1 st to 3 rd months
Stakeholders’ consultation including review of UNEP Gender Team	4 th to 5 th months
Preparation copy of the GAP	6 th month

- **Qualification Requirements**

- Mauritian National (local consultant)
- At least a master degree in social sciences
- 10 years of experience in gender studies, particularly in gender mainstreaming
- Preferably with experience with gender mainstreaming in energy infrastructure projects
- Proficiency in English language

ANNEX F-1: DETAILED GEF BUDGET (see original attached excel file)

ANNEX F-1 - RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET LINE (GEF FUNDS ONLY US\$)

Project title:		NATIONALLY APPROPRIATE MITIGATION ACTIONS FOR LOW CARBON ISLAND DEVELOPMENT STRATEGY FOR MAURITIUS									
Project number:											
Project executing partner:		Ministry of Environment, Sustainable Development, Disasters and Beach Management, (MoESDDBM)									
Project implementation period:											
From:	2016										
To:	2020										
		C.1: Building national capacities for NAMAs	C.2: Design and Implementation of energy sector pilot NAMA	C.3: Establishment of national MRV system and registry	Project Management	Total	Expenditure by calendar year				
UNEP Budget Line							Year 1*	Year 2*	Year 3*	Year 4*	Total
10	PERSONNEL COMPONENT										
1100	Project personnel										
1101	National Project Director	0	0	0	0	-	0	0	0	0	-
1102	Project manager	25000		5,000	72000	102,000	25500	25500	25500	25500	102,000
1103	Coordinator WG1	0	0	0	0	-	0	0	0	0	-
1104	Coordinator WG2	0	0	0	0	-	0	0	0	0	-
1105	Coordinator WG3	0	0	0	0	-	0	0	0	0	-
1199	Sub-total	25,000	-	5,000	72,000	102,000	25,500	25,500	25,500	25,500	102,000
1200	Consultants										
1201	National statistical expert		15,000	15,000		30,000	2,500	12,500.00	12,500.00	2,500.00	30,000
1202	Data collection and GHG modelling expert	20,000				20,000	7,500	12,500.00			20,000
1203	National sectoral expert for programatic approach	15,000	-	5,000		20,000	7,500	12,500			20,000
1204	National finance expert	20,000				20,000	3,000	12,000	5,000		20,000
1205	International financial expert (provided by cooperating partner)		-			-					
1206	Renew able energy expert		50,000			50,000	5,000	17,500	17,500	10,000	50,000
1207	Gender Expert	10,000				10,000	2,500	5,000	2,500		10,000
1299	Sub-total	65,000	65,000	20,000	-	150,000	28,000	72,000	37,500	12,500	150,000
1300	Administrative support										
1301	Administrative Assistant				33,000	33,000	8,250	8,250	8,250	8,250	33,000
1302						-					-
1303						-					-
1399	Sub-total	-	-	-	33,000	33,000	8,250	8,250	8,250	8,250	33,000
1600	Travel on official business										
1601	Site visits and meetings		10,000		5,000	15,000	2,500	5,000.00	5,000.00	2,500.00	15,000
1602	Overseas travels	7,500		7,500		15,000		7,000.00		8,000.00	15,000
1603						-					-
1699	Sub-total	7,500	10,000	7,500	5,000	30,000	2,500	12,000	5,000	10,500	30,000
1999	Component total	97,500	75,000	32,500	110,000	315,000	64,250	117,750	76,250	56,750	315,000
20	SUB-CONTRACT COMPONENT										
2100	Sub-contracts (MOUs/LOAs for cooperating agencies)										
2101	Provide advice on MRV institutional development			20,000		20,000		10,000	10,000		20,000
2102	Develop processes, procedures and guidances for Domestic MRV system			22,500		22,500		10,000	12,500		22,500
2103	Provide capacity development on MRV			22,500		22,500		10,000	12,500		22,500
2104	Provide advice on Monitoring plan for electricity generation sector			10,000		10,000		2,000	5,000	3,000	10,000
2105	Provide advice on establishing coordinating entity	28,000				28,000	14,000	14,000			28,000

To: 2020		Building national capacities for NAMAs	Design and Implementation of energy sector pilot NAMA	Establishment of national MRV system and registry	Project Management	Total	Expenditure by calendar year				
UNEP Budget Line							Year 1*	Year 2*	Year 3*	Year 4*	Total
2100	Provide advice and guidance on BAU development and national voluntary target	20,000				20,000	12,500	7,500			20,000
2107	Provide advice on MAC development and on mitigation opportunities	20,000				20,000		20,000			20,000
2108	Guide and advice on accessing international finance	10,000				10,000			7,500	2,500	10,000
2109	Provide guidance on programmatic approach	20,000				20,000	5,000	15,000.00			20,000
2110	Guide development of NAMA Registry	15,000				15,000		15,000.00			15,000
2111	Provide advice and guidance on development of NAMA prioritization framework	20,000				20,000		20,000.00			20,000
2112	Develop NAMA to promote wind electricity and financing by RE projects		170,000			170,000	20,000	60,000.00	60,000.00	30,000.00	170,000
2199	Sub-total	133,000	170,000	75,000	-	378,000	51,500	183,500	107,500	33,500	378,000
2200	Sub-contracts (MOUs/LOAs for supporting organizations)										
2201	IT support for NAMA registry and database development	60,000		37,500		97,500		50,000	30,000	17,500	97,500
2202	Regulatory, legal and policy framework review and recommendation to promote private sector participation		75,000			75,000		60,000	15,000		75,000
2203	RE resource mapping and development of resource map		170,000			170,000		140,000	30,000		170,000
2204	Review and recommendation of electricity project approval process		50,000			50,000		40,000	10,000		50,000
2205	RE grid integration and smart grid development strategy		95,000			95,000		80,000	15,000		95,000
2299	Sub-total	60,000	390,000	37,500	-	487,500	-	370,000	100,000	17,500	487,500
2300	Sub-contracts (for commercial purposes)										
2301						-					-
2302						-					-
2303						-					-
2399	Sub-total	-	-	-	-	-	-	-	-	-	-
2999	Component total	193,000	560,000	112,500	-	865,500	51,500	553,500	207,500	53,000	865,500
30	TRAINING COMPONENT										
3200	Group training										
3201	MRV training			10,000		10,000		5,000	5,000		10,000
3202	NAMA training	10,000				10,000	10,000				10,000
3203	Programmatic and prioritization framework	10,000				10,000	10,000				10,000
3204	Dissemination of institutional arrangements	5,000				5,000		5,000			5,000
3205	Training of financial sector on NAMAs		10,000			10,000		5,000	5,000		10,000
3299	Sub-total	25,000	10,000	10,000	-	45,000	20,000	15,000	10,000	-	45,000
3300	Meetings/Conferences										
3301	Meetings					-					-
3302	Stakeholders consultation	5,000	10,000		5,000	20,000	7,000	6,000.00	4,000.00	3,000.00	20,000
3303						-					-
3399	Sub-total	5,000	10,000	-	5,000	20,000	7,000	6,000	4,000	3,000	20,000
3999	Component total	30,000	20,000	10,000	5,000	65,000	27,000	21,000	14,000	3,000	65,000
40	EQUIPMENT AND PREMISES COMPONENT										
4100	Expendable equipment										

From: 2016											
To: 2020		C.1: Building national capacities for NAMAs	C.2: Design and Implementation of energy sector pilot NAMA	C.3: Establishment of national MRV system and registry	Project Management	Total	Expenditure by calendar year				
UNEP Budget Line							Year 1*	Year 2*	Year 3*	Year 4*	Total
	4101 Office supplies	2,000			2,000	4,000	500	1,000.00	1,000.00	1,500.00	4,000
	4102					-					-
	4103					-					-
	4199 Sub-total	2,000	-	-	2,000	4,000	500	1,000	1,000	1,500	4,000
	4200 Non-expendable equipment										
	4201 Office equipment & IT	10,000		5,000	2,000	17,000	12,000	5,000.00			17,000
	4202 GIS related software		100,000			100,000	100,000				100,000
	4203 Wind Energy Equipment										
	4203					-					-
	4299 Sub-total	10,000	100,000	5,000	2,000	117,000	112,000	5,000	-	-	117,000
4999	Component total	12,000	100,000	5,000	4,000	121,000	112,500	6,000	1,000	1,500	121,000
50	MISCELLANEOUS COMPONENT										
	5100 Operation and maintenance of equipment										
	5101					-					-
	5102					-					-
	5103					-					-
	5199 Sub-total	-	-	-	-	-	-	-	-	-	-
	5200 Reporting costs										
	5201 Audit				4,000	4,000				4,000.00	4,000
	5202 Printing	5,000	5,000	2,500	4,000	16,500	2,500	4,000.00	4,000.00	6,000.00	16,500
	5203					-					-
	5299 Sub-total	5,000	5,000	2,500	8,000	20,500	2,500	4,000	4,000	10,000	20,500
	5300 Sundry										
	5301					-					-
	5302					-					-
	5303					-					-
	5399 Sub-total	-	-	-	-	-	-	-	-	-	-
	5400 Hospitality and entertainment										
	5401					-					-
	5402					-					-
	5403					-					-
	5499 Sub-total	-	-	-	-	-	-	-	-	-	-
	5500 Evaluation										
	5501 Mid-term	7,500	20,000	5,000	2,500	35,000		20,000.00	15,000.00		35,000
	5502 Terminal evaluation	5,000	20,000	2,500	2,500	30,000				30,000.00	30,000
	5581					-					-
	5599 Sub-total	12,500	40,000	7,500	5,000	65,000	-	20,000	15,000	30,000	65,000
5999	Component total	17,500	45,000	10,000	13,000	85,500	2,500	24,000	19,000	40,000	85,500
99	GRAND TOTAL	350,000	800,000	170,000	132,000	1,452,000	257,750	722,250	317,750	154,250	1,452,000

ANNEX F-2: CO-FINANCING BUDGET (see original attached excel file)

ANNEX F-2 - RECONCILIATION BETWEEN GEF BUDGET AND CO-FINANCE BUDGET (TOTAL GEF & CO-FINANCE US\$)												
Project title:		NATIONALLY APPROPRIATE MITIGATION ACTIONS FOR LOW CARBON ISLAND DEVELOPMENT STRATEGY FOR MAURITIUS										
Project number:												
Project executing partner:		Ministry of Environment, Sustainable Development, Disasters and Beach Management, (MoESDDBM)										
Project implementation period:		If more than 4 sources of co-finance, add columns						*Name of institution providing co-finance				
From:	2016	GEF Cash	National Government		UNEP		UNEP DTU		Wind Energy	Private Investor	Total	Total Co-financing
To:	2020	Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind	
UNEP Budget Line		A	B	C	D	E	F	G	H	I	A+B+D+F+H	C+E+G+I
10	PERSONNEL COMPONENT											
1100	Project personnel										-	-
1101	National Project Director			10,000							-	10,000
1102	Project manager	102,000									102,000	-
1103	Coordinator WG1			5,000							-	5,000
1104	Coordinator WG2			5,000							-	5,000
1105	Coordinator WG3			5,000							-	5,000
1199	Sub-total	102,000	-	25,000	-	-	-	-	-	-	102,000	25,000
1200	Consultants										-	-
1201	National statistical expert	30000									30,000	-
1202	Data collection and GHG modelling expert	20000									20,000	-
1203	National sectoral expert for programatic approach	25000									25,000	-
1204	National finance expert	25000									25,000	-
1205	International financial expert	0									-	-
1206	Renewable energy expert	50000									50,000	-
1299	Sub-total	150,000	-	-	-	-	-	-	-	-	150,000	-
1300	Administrative support										-	-
1301	Administrative secretary	33,000		5,000							33,000	5,000
1302											-	-
1399	Sub-total	33,000	-	5,000	-	-	-	-	-	-	33,000	5,000
1600	Travel on official business										-	-
1601	Site visits and meetings	15,000									15,000	-
1602	Overseas travels	15,000									15,000	-
1699	Sub-total	30,000	-	-	-	-	-	-	-	-	30,000	-
1999	Component total	315,000	-	30,000	-	-	-	-	-	-	315,000	30,000
20	SUB-CONTRACT COMPONENT											
2100	Sub-contracts (for cooperating agencies)										-	-
2101	Provide advice on MRV institutional development	20,000				5,000		30,000			20,000	35,000
2102	Develop processes, procedures and guidances for Domestic MRV system	22,500				10,000		30,000			22,500	40,000
2103	Provide capacity development on MRV	22,500				5,000					22,500	5,000
2104	Provide advice on Monitoring plan for electricity generation sector	10,000				5,000					10,000	5,000
2105	Provide advice on establishing coordinating entity	28,000				5,000					28,000	5,000
2106	Provide advice and guidance on BAU development and national voluntary target	20,000				5,000					20,000	5,000
2107	Provide advice on MAC development and on mitigation opportunities	20,000				5,000					20,000	5,000
2108	Guide and advice on accessing international finance	10000				5,000					10,000	5,000
2109	Provide guidance on programatic approach	20,000				5,000					20,000	5,000
2110	Guide development of NAMA Registry	15,000				5,000					15,000	5,000
2111	Provide advice and guidance on development of NAMA prioritization framework	20,000				5,000		20,000			20,000	25,000
2112	Develop NAMA to promote wind electricitiy	170,000				5,000		20,000			170,000	25,000
2199	Sub-total	378,000	-	-	-	65,000	-	100,000	-	-	378,000	165,000

From: 2016		GEF Cash	National Government		UNEP		UNEP DTU		Wind Energy Private Investor		Total		Total Co-financing
To: 2020			Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind	
UNEP Budget Line		A	B	C	D	E	F	G	H	I	A+B+D+F+H	C+E+G+I	
2200	Sub-contracts (for supporting organizations)										-	-	-
2201	IT support for NAMA registry and database development	97,500				5,000					97,500	5,000	5,000
2202	Rregualtory, legal and policy framework review and recommendation to promote private sector participation	75,000				5,000					75,000	5,000	5,000
2203	RE resource mapping and development of resource map	170,000				10,000					170,000	10,000	10,000
2204	Review and recommendation of electricity project approval process	50,000				5,000					50,000	5,000	5,000
2205	RE grid intergration and smart grid development strategy	95,000				10,000					95,000	10,000	10,000
2299	Sub-total	487,500	-	-	-	35,000	-	-	-	-	487,500	35,000	35,000
2300	Sub-contracts (for commercial purposes)										-	-	-
2301											-	-	-
2999	2399 Sub-total	-	-	-	-	-	-	-	-	-	-	-	-
	Component total	865,500	-	-	-	100,000	-	100,000	-	-	865,500	200,000	200,000
30	TRAINING COMPONENT										-	-	-
3200	Group training										-	-	-
3201	MRV training	10,000									10,000	-	-
3202	NAMA training	10,000									10,000	-	-
3203	Programatic and prioritization framework	10,000									10,000	-	-
3204	Dissemination of institutional arrangements	5,000									5,000	-	-
3205	Training of financial sector on NAMAs	10,000									10,000	-	-
3299	Sub-total	45,000	-	-	-	-	-	-	-	-	45,000	-	-
3300	Meetings/Conferences										-	-	-
3301	Meetings	20,000		5,000							20,000	5,000	5,000
3302	Stakeholder consultations			15,000							-	15,000	15,000
3999	3399 Sub-total	20,000	-	20,000	-	-	-	-	-	-	20,000	20,000	20,000
	Component total	65,000	-	20,000	-	-	-	-	-	-	65,000	20,000	20,000
40	EQUIPMENT AND PREMISES COMPONENT										-	-	-
4100	Expendable equipment										-	-	-
4101	office supplies	4,000		5,000							4,000	5,000	5,000
4102											-	-	-
4199	Sub-total	4,000	-	5,000	-	-	-	-	-	-	4,000	5,000	5,000
4200	Non-expendable equipment										-	-	-
4201	Office equipment and IT	17,000									17,000	-	-
4202	GIS software	100,000									100,000	-	-
4203	Wind Energy Equipment									33,230,000	-	33,230,000	33,230,000
4299	Sub-total	117,000	-	-	-	-	-	-	-	33,230,000	117,000	33,230,000	33,230,000
4300	Premises										-	-	-
4301	office space			35,000							-	35,000	35,000
4302											-	-	-
4999	4399 Sub-total	-	-	35,000	-	-	-	-	-	-	-	35,000	35,000
	Component total	121,000	-	40,000	-	-	-	-	-	33,230,000	121,000	33,270,000	33,270,000
50	MISCELLANEOUS COMPONENT										-	-	-
5100	Operation and maintenance of equipment										-	-	-
5101											-	-	-
5199	Sub-total	-	-	-	-	-	-	-	-	-	-	-	-
5200	Reporting costs										-	-	-
5201	Audit	4,000									4,000	-	-
5202	Printing	16,500									16,500	-	-
5299	Sub-total	20,500	-	-	-	-	-	-	-	-	20,500	-	-
5300	Sundry										-	-	-
5301											-	-	-
5399	Sub-total	-	-	-	-	-	-	-	-	-	-	-	-
5400	Hospitality and Entertainment										-	-	-
5401											-	-	-
5499	Sub-total	-	-	-	-	-	-	-	-	-	-	-	-
5500	Evaluation										-	-	-
5501	Mid-term	35,000									35,000	-	-
5502	Terminal Evaluation	30,000									30,000	-	-
5999	5599 Sub-total	65,000	-	-	-	-	-	-	-	-	65,000	-	-
	Component total	85,500	-	-	-	-	-	-	-	-	85,500	-	-
99	GEES CEO Endorsement Template February 2013.doc										-	-	-
	GRAND TOTAL	1,452,000	-	90,000	-	100,000	-	100,000	-	33,230,000	1,452,000	33,520,000	33,520,000

ANNEX G: M&E BUDGET AND WORK PLAN

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures.

The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes Self-Monitoring, Analysis and Reporting Technology (SMART) indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. M&E related costs are presented in this costed M&E Plan and are fully integrated in the overall project budget.

The M&E plan will be presented to the first meeting of the Project Steering Committee (PSC) to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Day-to-day project monitoring is the responsibility of the Project Management Unit (PMU) but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The PSC will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-DTIE. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Monitoring and Reports

1.1. Day to day monitoring of implementation progress will be the responsibility of the Project Manager based on the Project's Annual Work Plan and its indicators. The PMU will inform UNEP and the partner executing agencies of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

1.2. Project Monitoring Reporting

The Project Manager in conjunction with PMU staff, UNEP and other partners involve in the project execution will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (d) are mandatory and strictly related to monitoring, while (e) has a broader function and the frequency and nature is project specific to be defined throughout implementation.

(a) Inception Report (IR)

A Project Inception Report will be prepared immediately following the first Project Steering Committee meeting. It will include a detailed First Year Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the Project. This Work Plan will include the proposed dates for any visits and/or support missions from UNEP, consultants, or any other partners as well as time-frames for meetings of the PSC. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

(b) Half-yearly Progress Report, Annual Project Report and Project Implementation Review (PIR)

The Half-yearly Progress Report is a self-assessment report by project management to the UNEP Office and provides them with input to the reporting process as well as forming a key input to the Project Review undertaken by the Project Steering Committee.

The PIR is an annual monitoring process mandated by the GEF, to be conducted by the UNEP Project Manager in consultation with the partner executing agencies. It has become an essential monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. In addition, UNEP Task Manager, based on the knowledge of the project progress, will submit to UNEP Evaluation Office an annual project report, which is a UNEP self-evaluation tool.

An Annual Project Report is prepared on an annual basis. The purpose of the Annual Project Report is to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The Annual Project Report and Project Implementation Review (PIR) are discussed in the Project Steering Committee so that the resultant report represents a document that has been agreed upon by all of the primary stakeholders.

(c) Periodic Thematic Reports

As and when called for by UNEP, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNEP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNEP are requested to minimize their requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

(d) Project Terminal Report

During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

(e) Technical Reports

Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent Annual Project Reports.

Independent Evaluations

In-line with UNEP Evaluation Policy and the GEF's Monitoring and Evaluation Policy the project will be subject to a Terminal Evaluation and, additionally, a Mid-Term Review will be commissioned and launched by the Project Manager before the project reaches its mid-point. The possibility of a Mid-Term Evaluation will be discussed with the Evaluation Office and decided by the Task Manager.

The Evaluation Office will be responsible for the Terminal Evaluation (TE) and will liaise with the Task Manager and Executing Agency(ies) throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF, executing partners and other stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget. The Terminal Evaluation will be initiated no earlier than six months prior to the operational completion of project activities and, if a follow-on phase of the project is envisaged, should be completed prior to completion of the project and the submission of the follow-on proposal. Terminal Evaluations must be initiated no later than six months after operational completion.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalised and further reviewed by the GEF Independent Evaluation Office upon submission. The evaluation report will be publically disclosed and may be followed by a recommendation compliance process.

Audit Clause

The partner executing agencies will provide UNEP with quarterly financial reports as well as certified annual financial statements with an audit of the financial statements relating to the status of UNEP (including GEF) funds. The Audit will be conducted by the legally recognized auditor, or by a commercial auditor.

Learning and Knowledge Sharing

The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects. UNEP shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. To this end a percentage of project resources will need to be allocated for these activities.

Indicative Monitoring and Evaluation Work plan and corresponding Budget

Type of M&E activity	Responsible Parties	Budget US\$	Time frame
Project Steering Committee Meetings and Inception workshop	<ul style="list-style-type: none"> ▪ Project Manager ▪ Project Team (PMU) ▪ UNEP 	<p>1st PSC Meeting will be convened as an inception workshop and PSC meeting.</p> <p>Cost is covered under the meetings budget line.</p>	1 st PSC Meeting will serve as Inception workshop and will be held within first two months of project start up.
Inception Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ Project Team (PMU) ▪ UNEP 	None	Immediately following inception workshop
Measurement of indicators set in the Logframe (Project Progress and Performance to be measured on an annual	<ul style="list-style-type: none"> ▪ GEF Task Manager ▪ Project Manager 	Costs to be determined as part of the Annual Work Plan's preparation.	Annually prior to APR/PIR and to the definition of annual work plans

basis)			
PIR	<ul style="list-style-type: none"> ▪ Project Manager and Project Team (PMU) ▪ Project GEF Task Manager ▪ UNEP 	None	Annually
Periodic status reports	<ul style="list-style-type: none"> ▪ Project team (PMU) 	None	To be determined by Project team, UNEP and EAs
Technical reports	<ul style="list-style-type: none"> ▪ Working Groups ▪ Task force ▪ Hired consultants as needed 	The costs of these reports are covered under the budget of corresponding activities	To be determined by Project Team, UNEP and EAs
Mid-Term External Evaluation	<ul style="list-style-type: none"> ▪ Project team (PMU) ▪ UNEP ▪ External Consultants (i.e. evaluation team) 	35,000 USD (includes rates, DSA and flights)	At the end of 2nd year
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project team (PMU) ▪ UNEP ▪ External Consultants (i.e. evaluation team) 	30,000 USD (includes rates, DSA and flights)	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Project team (PMU) ▪ UNEP ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team (PMU) ▪ UNEP 	None	Yearly as part of the PIR
Audit	<ul style="list-style-type: none"> ▪ UNEP ▪ Project team (PMU) 	4,000 USD	Yearly
TOTAL indicative COST		69,000 USD (GEF)	

ANNEX H: Project Implementation Arrangements

The GEF Implementing Agency for the Project will be UNEP. In this sense, UNEP will be responsible for project oversight, including the achievement of project results, financial execution and the submission of reports according to UNEP and GEF requirements.

During the execution of the project, the Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM) will be the GEF Executing Agency. MoESDDBM will have lead responsibility for cross-sectoral activities. In addition, the Ministry of Energy and Public Utilities will be responsible for the execution of the Energy NAMA.

UNEP- DTU Partnership (UDP) is the co-executing Agency of this project, and will support MoESDDBM in implementing the project. UDP will be directly contracted by UNEP and manage the funds for the GoM. The role of UDP is also described in section B.1.2 of the CEO Approval Request document. UDP will be responsible for contracting the experts in consultation with the NPD and PM.

A Project Steering Committee (PSC) will be established and will be made of representatives from the funding/co-funding agencies, senior representatives of relevant Government agencies and other key stakeholder (such as project developers, industries associations and NGOs), as appropriate. This will ensure an integrated approach to deal with the challenges and opportunities that consider the interests of all stakeholders, including cross-cutting concerns/activities that incorporate and support gender equality and marginal group participation. PSC will be the highest level of supervision for Project implementation.

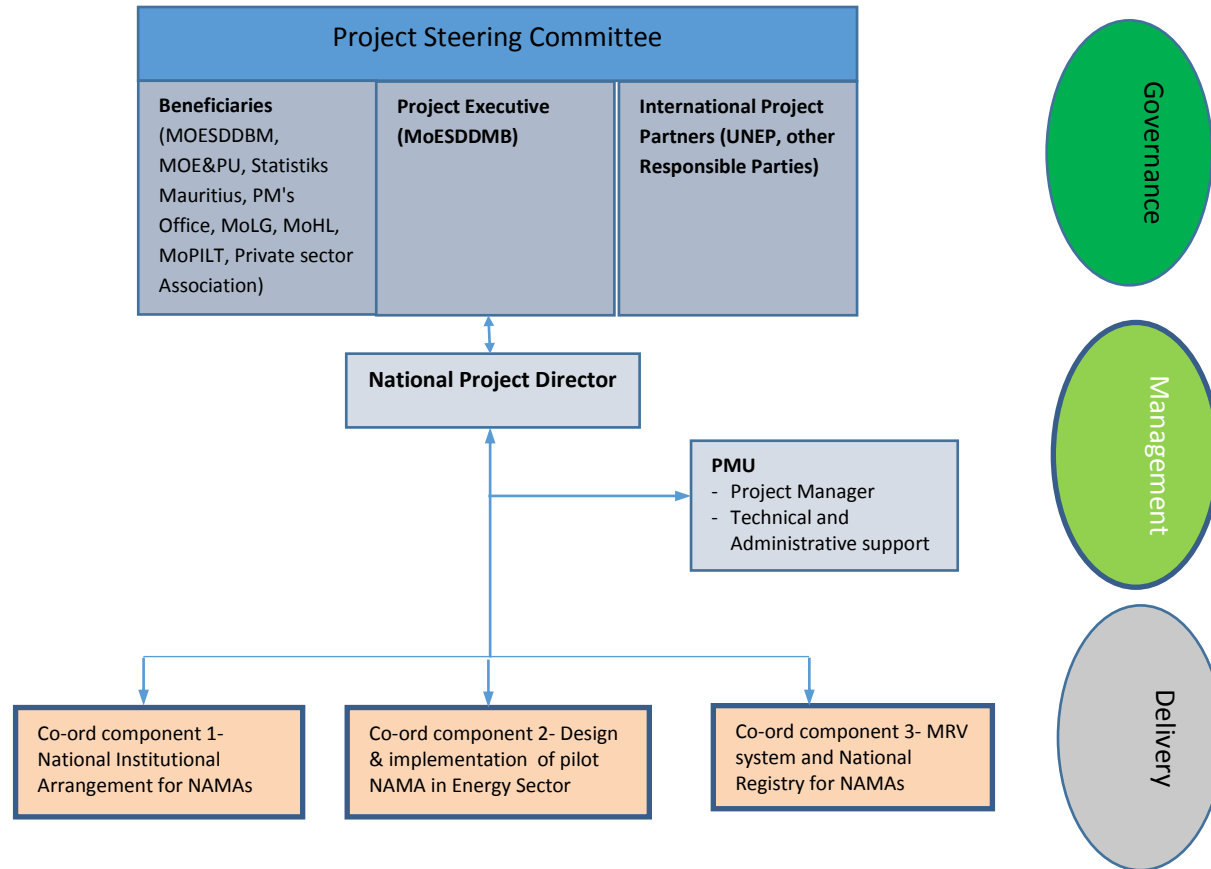
The Project Steering Committee (PSC), chaired by the National Project Director, will be responsible for overseeing the project, approving plans and budgets, coordinating the inputs and support of national and international partners, and monitoring and evaluation of results and lessons learned. In addition, any decisions that require modification of the outputs and activities of the project, or changes to legal structures and mechanisms, will be of the responsibility of the Project Steering Committee. The PSC will meet quarterly during the first year of the project, and twice yearly in subsequent years.

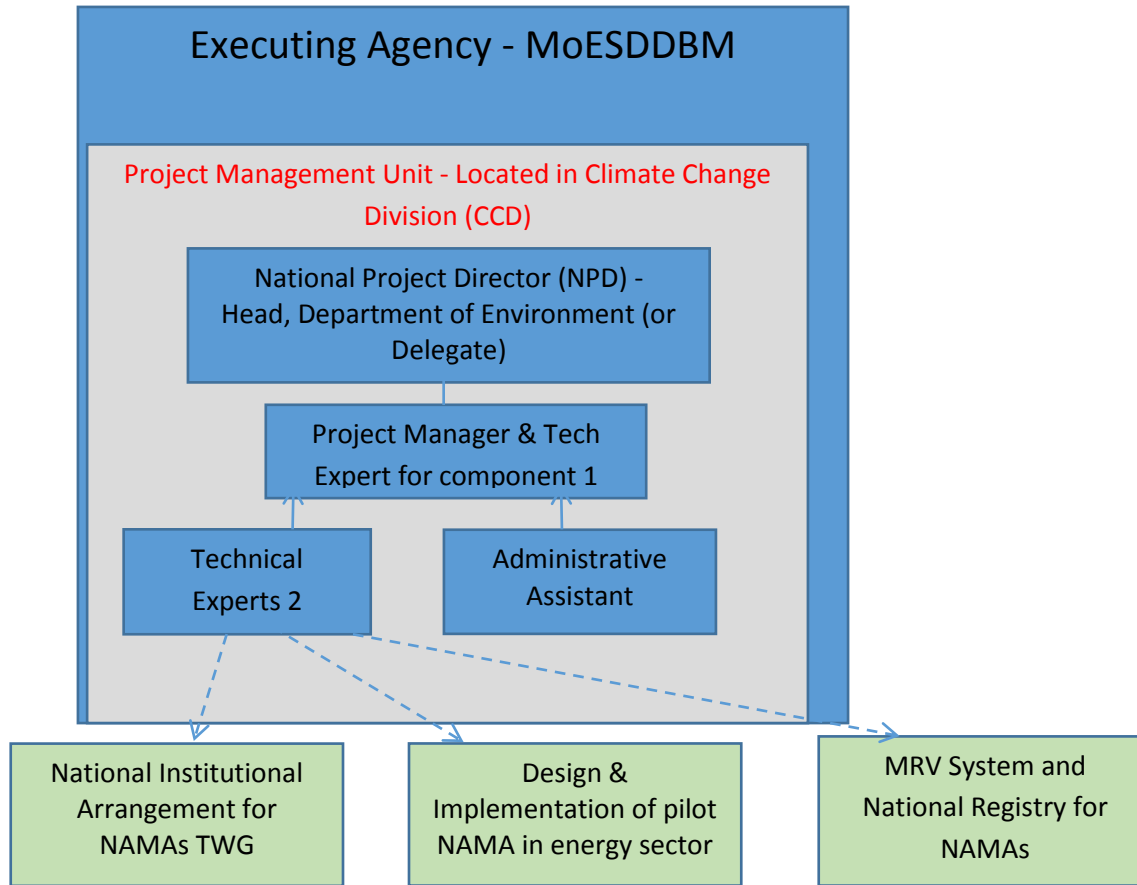
National Project Director will be a full time employee of the MoESDDBM and will be responsible for overseeing the implementation of the project with the support of Project Management Unit (PMU).

The PMU will be situated within the Climate Change Division of MoESDDBM in Port Louis. The PMU will have responsibility for project implementation and management of resources on a day-to-day basis, and PMU staff will prepare workplans, budgets, project proposals, progress reports, etc. PMU will be headed by a Project Manager and will include and one administrative support staff.

Three component coordinators will be established under the leadership of the National Project Director. These three coordinators are responsible for leading and controlling the implementation of project activities with an integrated approach, although each of the components will utilize its own procedures and norms for implementing activities. To ensure effective coordination of activities, however, the National Project Director will oversee the activities of the three components.

In particular case of demonstration wind farms to be established under the Project Component 2 to pilot the NAMA, the management of the wind farm implementation will be by the investors. The managers of these demonstration wind farms will work closely with the Coordinator of Project Component 2, which will be from the Ministry of Energy.





ANNEX I – Work plan with deliverables and benchmarks

Components/Outcomes	Year1												Year2												Year3		Year4									
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1-11		12	1-11		12						
0 Project establishment and inception workshop																																				
Component 1: Building national capacity for cross-sectoral engagement in the formulation and implementation of NAMAs																																				
1.1.1. Develop options of institutional arrangements to coordinate Mitigation actions																																				
1.1.2. Develop process, procedure and guidelines for NAMA identification, development and implementation																																				
1.1.3. Initiate process of government endorsement and establishment of NLCSDC																																				
1.2.1. Review the Third National Communication analysis of national GHG emissions and development of National BAU emissions and mitigation opportunities identified																																				
1.3.1. Identification and analysis of potential NAMAs																																				

2.1.4. Project emission targets with implementation of NAMA																																																																	
2.2.1. Implementation of wind farm projects																																																																	
2.3.1. Develop RE Grid integration strategy																																																																	
2.3.2. Develop options for streamlining project approval process																																																																	
2.3.3. Review of Legal and contractual framework for tendering for RE electricity based on international best practices																																																																	
2.3.4. Develop RE/wind energy potential site map																																																																	
2.3.5. Assessment of International concessional financial support for REs/NAMAs																																																																	
2.3.6. Development of knowledge products prepared for awareness raising and awareness raising workshops for national financing institutions																																																																	
Component 3: Establishment of MRV system and national registry for NAMAs																																																																	
3.1.1. Analysis and development of options for domestic MRV System																																																																	


Component/Outcome/Outputs	Activities	Deliverables	Benchmarks
<p>Project Outputs 1.1: <i>Lead agency with convening power designated, and supported by a strong team involving key stakeholders established.</i></p>	<ul style="list-style-type: none"> • Develop options of institutional arrangements to coordinate Mitigation actions • Develop process, procedure and guidelines for NAMA identification, development and implementation • Initiate process of government endorsement and establishment of NLCSDC 	<p><i>Lead agency with convening power designated</i></p>	<ol style="list-style-type: none"> 1. Clearly defined Institutional structure with specific roles and responsibilities of different actors. 2. Clearly defined process and procedures for coordinating identification, development, and implementation of NAMAs in accordance with low carbon development strategy.
<p>Project Output 1.2: <i>A national voluntary emission reduction target formulated based on National reference GHG emission baseline established for each sector.</i></p>	<ul style="list-style-type: none"> • Review the Third National Communication analysis of national GHG emissions and development of National BAU emissions and mitigation opportunities identified 	<p><i>A national voluntary emission reduction target formulated</i></p>	<ol style="list-style-type: none"> 1. Stakeholder consideration and endorsement of the mitigation opportunities and target for different sectors according to the national sustainable development priorities. 2. Peer reviewed marginal costs of implementing the mitigation actions
<p>Project output 1.3: <i>A national NAMA list constituted and submitted to the "International Registry"</i></p>	<ul style="list-style-type: none"> • Identification and analysis of potential NAMAs • Analysis of costs of implementation of potential mitigation opportunities and development of MAC 	<p><i>A final NAMA list at national level</i></p>	<ol style="list-style-type: none"> 1. Stakeholder endorsed list of NAMAs in line with identified mitigation opportunities by sector 2. Stakeholder endorsement of the identified NAMAs list
<p>Project output 1.4: <i>Partners for "Supported NAMAs" identified</i></p>	<ul style="list-style-type: none"> • Assessment of potential international support providers for identify NAMAs 	<p><i>List of INTERNATIONAL partners involved in NAMA implementation</i></p>	<ol style="list-style-type: none"> 1. Comprehensive analysis of all potential international support providers and international partners of Mauritius.

Project output 1.5: <i>Programmatic Sectoral NAMAs drafted</i>	<ul style="list-style-type: none"> • Formulations of programmatic approach to NAMAs 	<i>Programmatic NAMA idea for Reducing GHG emissions from Port operations</i>	<ol style="list-style-type: none"> 1. Clear identification of key interventions to achieve the mitigation potential 2. Assessment of GHG impact and identification of MRV requirements
Project Output 1.6: <i>A national NAMA registry established</i>	<ul style="list-style-type: none"> • Establishing the national NAMA registry 	<i>A web based interactive national NAMA registry</i>	<ol style="list-style-type: none"> 3. Clear process and procedures for national NAMA registry 4. Web based fully functional national registry platform
Project Output 1.7: <i>Approaches & methodologies for classifying and prioritizing NAMAs developed and implemented</i>	<ul style="list-style-type: none"> • Development of NAMA Prioritization framework • Develop prioritized list of NAMAs 	<i>NAMA prioritization framework</i>	<ol style="list-style-type: none"> 1. Clearly defined NAMA prioritization, criteria, indicators and weights 2. A list of prioritized NAMAs (based on NAMAs identified in output 3.1)
Project Output 1.8: <i>Gender mainstreamed into this project and capacity building activities</i>	<ul style="list-style-type: none"> • Conduct gender analysis and prepare gender mainstreaming report 	<i>Gender analysis report & recommendations for gender mainstreaming</i>	<ol style="list-style-type: none"> 1. Impact assessment of gender mainstreaming.
Project Output 2.1: <i>Electricity generation sector NAMA on utility-scale wind energy analysed, designed & financed</i>	<ul style="list-style-type: none"> • Assessment of RE potential in RoM • Detailed barrier analysis to RE implementation in RoM • Analyze techno-economic feasibility of utility scale wind projects • Project emission targets with implementation of NAMA 	<i>Wind energy NAMA document with financial arrangements for implementation</i> <i>20 million USD mobilized</i>	<ol style="list-style-type: none"> 1. Stakeholders endorse the NAMA design 2. Financial closer achieved for investments 3. At least two investors commit funds to implement Renewable Energy projects.
Project Output 2.2: <i>Two utility scale Wind farm projects implemented through private sector co-financing contributing to GHG emissions reduction</i>	<ul style="list-style-type: none"> • Implementation of wind farm projects 	<i>At least two Wind Electricity Projects</i>	37.9 MW Wind electricity project operational and connected to the grid

<p>Project Output 2.3: <i>An attractive policy, regulatory, and supportive framework developed to facilitate investment for utility-scale RE projects</i></p>	<ul style="list-style-type: none"> • Develop RE Grid integration strategy • Develop options for streamlining project approval process • Review of Legal and contractual framework for tendering for RE electricity based on international best practices • Develop RE/wind energy potential site map • Assessment of International concessional financial support for REs/NAMAs • Development of knowledge products prepared for awareness raising and awareness raising workshops for national financing institutions 	<p><i>Supportive policy, regulatory and institutional mechanism for establishing utility scale Wind energy projects</i></p>	<ol style="list-style-type: none"> 1. Stakeholder endorsed national strategy covering policy, regulatory and incentive mechanism 2. Review of current policy, legal/regulatory and financial frameworks 3. Proposal for new policy and legislative instruments & financial tools and incentives 4. Review of roles and responsibilities of national stakeholders
<p>Project Output 3.1: <i>Institutional framework and organizational linkages for MRV, including link to in the national registry mechanism, established</i></p>	<ul style="list-style-type: none"> • Analysis and development of options for domestic MRV System • Stakeholder consultations and notification of domestic MRV system 	<p><i>Institutional and organization linkages for MRV</i></p>	<ol style="list-style-type: none"> 1. Institutional structure with specific roles and responsibilities for different actors for MRV
<p>Project Output 3.2: <i>MRV system, including monitoring plan covering key parameters for the electricity generation sector, designed & implemented</i></p>	<ul style="list-style-type: none"> • Design and implement monitoring plan for Electricity Generation Sector • Develop reporting and verification requirements for Electricity Generation Sector • Conduct training for MRV of Electricity Generation Sector 	<p><i>Data on energy and GHG parameters</i></p>	<ol style="list-style-type: none"> 1. Energy parameters defined 2. GHG parameters defined 3. SD parameters defined 4. Process and procedures for monitoring energy NAMA parameters

Project Output 3.4: <i>Local technical professionals to conduct MRV enabled</i>	<ul style="list-style-type: none"> Design and conduct training workshops for awareness raising on domestic MRV system 	<i>Enhanced awareness of domestic MRV system</i>	30 persons provided enhanced understanding
Project Output 3.4: <i>MRV technical committee specific to the energy pilot sector, constituted</i>	<ul style="list-style-type: none"> Design and conduct training for developing and implementing MRV for NAMAs 	<i>Trained professionals on MRV system</i>	1. 30 persons provided enhanced understanding

ANNEX J. GEF TRACKING TOOL (see original attached excel file)

 Tracking Tool for Climate Change Mitigation Projects (For CEO Endorsement)		
Special Notes: reporting on lifetime emissions avoided Lifetime direct GHG emissions avoided: Lifetime direct GHG emissions avoided are the emissions reductions attributable to the investments made during the project's supervised implementation period , totaled over the respective lifetime of the investments. Lifetime direct post-project emissions avoided: Lifetime direct post-project emissions avoided are the emissions reductions attributable to the investments made outside the project's supervised implementation period, but supported by financial facilities put in place by the GEF project, totaled over the respective lifetime of the investments. These financial facilities will still be operational after the project ends, such as partial credit guarantee facilities, risk mitigation facilities, or revolving funds. Lifetime indirect GHG emissions avoided (top-down and bottom-up): indirect emissions reductions are those attributable to the long-term outcomes of the GEF activities that remove barriers, such as capacity building, innovation, catalytic action for replication. Please refer to the Manual for Calculating GHG Benefits of GEF Projects. Manual for Energy Efficiency and Renewable Energy Projects Manual for Transportation Projects For LULUCF projects, the definitions of "lifetime direct and indirect" apply. Lifetime length is defined to be 20 years, unless a different number of years is deemed appropriate. For emission or removal factors (tonnes of CO2eq per hectare per year), use IPCC defaults or country specific factors.		
General Data	Target at CEO Endorsement	Notes
Project Title		
GEF ID	5649	
Agency Project ID	1272	
Country	Mauritius	
Region	AFR	
GEF Agency	UNEP	
Date of Council/CEO Approval		Month DD, YYYY (e.g., May 12, 2010)
GEF Grant (US\$)	1,452,000	
Date of submission of the tracking tool		Month DD, YYYY (e.g., May 12, 2010)
Is the project consistent with the priorities identified in National Communications, Technology Needs Assessment, or other Enabling Activities under the UNFCCC?	1	Yes = 1, No = 0
Is the project linked to carbon finance?	0	Yes = 1, No = 0
Cofinancing expected (US\$)	33,520,000	

Objective 3: Renewable Energy

Please specify if the project includes any of the following areas		
Heat/thermal energy production		Yes = 1, No = 0
On-grid electricity production	1	Yes = 1, No = 0
Off-grid electricity production		Yes = 1, No = 0
Policy and regulatory framework	4	0: not an objective/component 1: no policy/regulation/strategy in place 2: policy/regulation/strategy discussed and proposed 3: policy/regulation/strategy proposed but not adopted 4: policy/regulation/strategy adopted but not enforced 5: policy/regulation/strategy enforced
Establishment of financial facilities (e.g., credit lines, risk guarantees, revolving funds)	0	0: not an objective/component 1: no facility in place 2: facilities discussed and proposed 3: facilities proposed but not operationalized/funded 4: facilities operationalized/funded but have no demand 5: facilities operationalized/funded and have sufficient demand
Capacity building	5	0: not an objective/component 1: no capacity built 2: information disseminated/awareness raised 3: training delivered 4: institutional/human capacity strengthened 5: institutional/human capacity utilized and sustained
Installed capacity per technology directly resulting from the project		
Wind	37.90	MW
Biomass		MW el (for electricity production)
Biomass		MW th (for thermal energy production)
Geothermal		MW el (for electricity production)
Geothermal		MW th (for thermal energy production)
Hydro		MW
Photovoltaic (solar lighting included)		MW
Solar thermal heat (heating, water, cooling, process)		MW th (for thermal energy production, 1m ² = 0.7kW)
Solar thermal power		MW el (for electricity production)
Marine power (wave, tidal, marine current, osmotic, ocean thermal)		MW
Lifetime energy production per technology directly resulting from the project (IEA unit converter: http://www.iea.org/stats/unit.asp)		
Wind	1,270,000.00	MWh
Biomass		MWh el (for electricity production)
Biomass		MWh th (for thermal energy production)
Geothermal		MWh el (for electricity production)
Geothermal		MWh th (for thermal energy production)
Hydro		MWh
Photovoltaic (solar lighting included)		MWh
Solar thermal heat (heating, water, cooling, process)		MWh th (for thermal energy production)
Solar thermal power		MWh el (for electricity production)
Marine energy (wave, tidal, marine current, osmotic, ocean thermal)		MWh
Lifetime direct GHG emissions avoided	306,737	tonnes CO2eq (see Special Notes above)
Lifetime direct post-project GHG emissions avoided		tonnes CO2eq (see Special Notes above)
Lifetime indirect GHG emissions avoided (bottom-up)	613,474	tonnes CO2eq (see Special Notes above)
Lifetime indirect GHG emissions avoided (top-down)	352,062	tonnes CO2eq (see Special Notes above)

Objective 6: Enabling Activities

Please specify the number of Enabling Activities for the project (for a multiple country project, please put the number of countries/assessments)		
National Communication		
Technology Needs Assessment		
Nationally Appropriate Mitigation Actions	1	
Other		
Does the project include Measurement, Reporting and Verification (MRV) activities?	1	Yes = 1, No = 0

ANNEX K. OFP ENDORSEMENT LETTER



MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT
Government Centre, Port Louis, Mauritius

17 November 2015

GEF Coordination Office
United Nations Environment Programme (UNEP)
United Nations Avenue
P O Box 30552-00100
Nairobi
Kenya
Email: gcfinfo@unep.org

Dear Sir/Madam,

Subject: Endorsement for Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy

In my capacity as the GEF Operational Focal Point for Mauritius, I confirm that the above project proposal (a) is in accordance with the national priorities of Government and our commitment to the relevant global environmental conventions and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

2. I am pleased to endorse the above project proposal which has been prepared with the support of the UNEP. If approved, the project will be executed by the Ministry of Environment, Sustainable Development, Disasters and Beach Management, Ministry of Energy and Public Utilities and the Central Electricity Board.

3. The financing requested under GEF-5 STAR allocation for Climate Change Focal Area for the Republic of Mauritius is detailed in the table below:

Source of Funds	GEF Agency	Focal Area	AMOUNT (in USD)		
			Project	Agency Fee	Total
GEFTF	UNEP	CC	1,452,000	137,940	1,589,940

Sincerely,

D. D Manraj, G.O.S.K
*Financial Secretary &
GEF Operational Focal Point*

ANNEX L. LETTERS OF CO-FINANCING



MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT
Government Centre, Port Louis, Mauritius

21 January 2016

GEF Coordination Office
United Nations Environment Programme (UNEP)
United Nations Avenue
P O Box 30552-00100
Nairobi
Kenya
Email: gefinfo@unep.org

Dear Madam/ Sir

Subject: Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy

Further to my endorsement letter dated 17 November 2015, in my capacity as the GEF Operational Focal Point for Mauritius, I wish to confirm the commitment of the Government of Mauritius to provide the necessary in-kind co-financing amounting to USD 90, 000 to support the implementation of the GEF project "Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy".

2. This co-financing will be incurred by the Ministry of Environment, Sustainable Development, Disasters and Beach Management, Ministry of Energy and Public Utilities and the Central Electricity Board.
3. We look forward to have a positive response from GEF Secretariat and a fruitful collaboration with UNEP for the implementation of the above mentioned project.

Sincerely,

D. D Manraj, G.O.S.K
Financial Secretary &
GEF Operational Focal Point



Ms. Ligia Noronha,
Director,
Division of Technology, Industry & Economics,
United Nation Environment Programme (UNEP)
Paris, France

Date 26/05/2016

Subject: Co-Financing for Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy (Mauritius)

On behalf of Aerowatt Mauritius Ltd , I am pleased to express my full support to the GEF-financed project on “**Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy**”. The project is aligned with, and supportive of promotion of renewable energy in Mauritius.

Aerowatt Mauritius Ltd will support the GEF project through co-financing of 18.230 000\$) representing total investment costs, for Component 2 through its 8,5 MW grid-connected (Eole Plaine des Roches Wind Farm at Roches Noires

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Oudin", is written over a light blue circular stamp.

Cyril Oudin
Director
Aerowatt Mauritius Ltd

AÉROVATT
Mauritius Ltd
6 av Des Truites Morc Anna Flic en Flac
00 230 5259 67 27 c.oudin@quadran.fr



CSPG/CWF/UNEP/AH/CF

June 29th, 2015

Director,
Division of Technology, Industry & Economics,
United Nation Environment Programme (UNEP)
Paris, France

Attention: Ms. Ligia Narunha,


Dear Madam,

**Re: Co-Financing for Nationally Appropriate Mitigation Actions for Low Carbon Island
Development Strategy (Mauritius)**

On behalf of the Consortium Suzlon-Padgreen Co Ltd, I am pleased to express my full support to the GEF-financed project on "Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy". The project is aligned with, and supportive of promotion of renewable energy in Mauritius.

The Consortium Suzlon-Padgreen Co Ltd will support the GEF project through co-financing of US\$ 15,000,000, representing total investment costs, for Component 2 through its 29.4 MW grid-connected Catepipe Point Wind Farm at Plaine Sophie.

Sincerely,


Alain Hsu Thya Voon
Managing Director

Motorway 63, Roche Tanne
Tant - Reuge, Mauritius

Office + (230) 2481114
Mobile + (230) 7388014
Fax + (230) 2481104
E-Mail : ah@padgreenconstruction.com

Ms. Ligia Noronha
Director,
Division of Technology, Industry and Economics (DTIE),
UNEP



Copenhagen, 21th January 2016

Object: Co-financing to the GEF Project Proposal 'Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy for Mauritius (NAMAs)'

In my capacity as Head of UNEP DTU Partnership, I wish to confirm the commitment to provide the necessary co-financing to the relevant components of the GEF project: 'Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy for Mauritius (NAMAs)'.

The co-financing component totalling USD 100,000 towards development of methodological guidance and tools to undertake the institutional strengthening, development of NAMA and MRV framework over a period of 3 years consists of in-kind contribution from the UNEP DTU Partnership.

Yours sincerely

A handwritten signature in blue ink, appearing to read "John W. Christensen".

Mr. John W. Christensen
Head of UNEP DTU Partnership



UNEP DTU Partnership
Department of Management Engineering
Technical University of Denmark – DTU
UN City, Marmorvej 52
DK-2300 Copenhagen Ø, Denmark

Phone: +45 4533 5250
Email: unep@dtu.dk
Web: unepdtu.org



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
البرنامج البيئي للأمم المتحدة

聯合國環境規劃署



MEMORANDUM

To: **Brennan Van Dyke**

Date: **10 February 2016**

cc: **Ligia Noronha**
Director, UNEP-DTIE

From: **Mark Radka**
Chief, Energy, Climate & Technology Branch

Subject: **GEF CC Mauritius – Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy: Request for a Letter of Co-financing (In-kind)**

I refer to the above-mentioned request and wish to confirm that UNEP, through DTIE, will provide technical advisory services and support for the above-mentioned GEF Climate Change mitigation project for Mauritius. This project has been developed in collaboration with Mauritius Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDOB).

To support this project, DTIE will make available staff involved in the climate change sub-programme.

The in-kind contribution is estimated to be \$100,000 over the 48 month duration. We understand that direct costs of travel related to execution of the project will be covered through the project budget.

Annex M: Environmental and Social Safeguards Checklist

As part of the GEFs evolving Fiduciary Standards that Implementing Agencies have to address 'Environmental and Social Safeguards'. To fill this checklist:

- STEP 1: Initially assess E&S Safeguards as part of PIF development. The checklist is to be submitted for the CRC.
- STEP 2 : Check list is reviewed during PPG project preparation phase and updated as required
- STEP 3 : Final check list submitted for PRC showing what activities are being undertaken to address issues identified

UNEP/GEF Environmental and Social Safeguards Checklist

Project Title:	<i>Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy</i>		
GEF project ID and UNEP ID/IMIS Number	00788	Version of checklist	
Project status (preparation, implementation, MTE/MTR, TE)	preparation	Date of this version:	
Checklist prepared by (Name, Title, and Institution)			

In completing the checklist both short- and long-term impact shall be considered.

Section A: Project location

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	Comment/explanation
- Is the project area in or close to -		
- densely populated area	No	
- cultural heritage site	No	
- protected area	No	
- wetland	No	
- mangrove	No	
- estuarine	No	
- buffer zone of protected area	No	
- special area for protection of biodiversity	Yes	The site of the wind energy project is adjacent to the Bras d'Eau National Park that is a known site for endemic plants. The project has been granted an EIA permit indicating that it has no detrimental impacts on the biodiversity of the Bras d'Eau National Park.
- Will project require temporary or permanent support facilities?	No	
<i>If the project is anticipated to impact any of the above areas an Environmental Survey will be needed to determine if the project is in conflict with the protection of the area or if it will cause significant disturbance to the area.</i>		

Section B: Environmental impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Are ecosystems related to project fragile or degraded?	No	
- Will project cause any loss of precious ecology, ecological, and economic functions due to construction of infrastructure?	No	
- Will project cause impairment of ecological opportunities?	No	
- Will project cause increase in peak and flood flows? (including from temporary or permanent waste waters)	No	
- Will project cause air, soil or water pollution?	No	
- Will project cause soil erosion and siltation?	No	
- Will project cause increased waste production?	No	
- Will project cause Hazardous Waste production?	No	
- Will project cause threat to local ecosystems due to invasive species?	No	
- Will project cause Greenhouse Gas Emissions?	No	The wind energy project is expected to <u>reduce</u> the generation of GHG.
- Other environmental issues, e.g. noise and traffic	No	The EIA that has been carried out by the project contains elements related to noise pollution. Any noise pollution emanating from the wind farm are within the regulations of the Environmental Protection Act (EPA).
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section C: Social impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Does the project respect internationally proclaimed human rights including dignity, cultural property and uniqueness and rights of indigenous people?	N.A.	There are no indigenous peoples in Mauritius.
- Are property rights on resources such as land tenure recognized by the existing laws in affected countries?	Yes	The project site is on land owned by the State and leased to the private project developer based on land tenure legislation of Mauritius.
- Will the project cause social problems and conflicts related to land tenure and access to resources?	No	Besides the fact that the land on which the wind energy project is sited is owned by the State, the project developer has carried out extensive stakeholder consultations as part of the EIA process to address any social concerns that neighbouring communities or anyone in Mauritius may have. No such issues were identified.
- Does the project incorporate measures to allow affected stakeholders' information and consultation?	Yes	The project developer has carried out extensive stakeholder consultations as part of the EIA process to address any social concerns that neighbouring communities or anyone in Mauritius may have. The project Environmental management Plan (EMP) makes provision for ongoing stakeholder consultation where the

		need arises. Further, the Ministry of Environment has an environmental grievance mechanism in place for concerned citizens to lodge complaints or obtain information concerning the wind energy project.
- Will the project affect the state of the targeted country's (-ies') institutional context?	No	
- Will the project cause change to beneficial uses of land or resources? (incl. loss of downstream beneficial uses (water supply or fisheries)?	No	
- Will the project cause technology or land use modification that may change present social and economic activities?	No	
- Will the project cause dislocation or involuntary resettlement of people?	No	
- Will the project cause uncontrolled in-migration (short- and long-term) with opening of roads to areas and possible overloading of social infrastructure?	No	
- Will the project cause increased local or regional unemployment?	No	On the contrary, the wind energy project is expected to increase local job creation.
- Does the project include measures to avoid forced or child labour?	N.A.	Forced or child labour is not practiced in Mauritius.
- Does the project include measures to ensure a safe and healthy working environment for workers employed as part of the project?	Yes	The project is fully compliant with the Occupational Safety and Health Act 2005.
- Will the project cause impairment of recreational opportunities?	No	
- Will the project cause impairment of indigenous people's livelihoods or belief systems?	N.A.	There are no indigenous peoples in Mauritius.
- Will the project cause disproportionate impact to women or other disadvantaged or vulnerable groups?	No	The project has been designed, conceptualized and implementation has started by adhering with all labour laws (Labour Act 1975; Recruitment of Workers Act 1993; Employment Relations Act 2008 and Regulations; Employment Rights Act 2008 and Relations), and following the Equal Opportunities Act 2008 of Mauritius.
- Will the project involve and or be complicit in the alteration, damage or removal of any critical cultural heritage?	No	
- Does the project include measures to avoid corruption?	No	The proponent abides by the national laws and regulations, which are designed to avoid corruption.
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section D: Other considerations

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Does national regulation in affected country (-ies) require EIA and/or ESIA for this type of activity?	Yes	The project has been granted a EIA license
- Is there national capacity to ensure a sound implementation of EIA and/or SIA requirements present in affected country (-ies)?	Yes	
- Is the project addressing issues, which are already addressed by other alternative approaches and projects?	N.A.	The project is the first of its kind in Mauritius
- Will the project components generate or contribute to cumulative or long-term environmental or social impacts?	Yes	The wind energy project is expected to deliver global environmental benefits through the reduction of CO2 emissions.
- Is it possible to isolate the impact from this project to monitor E&S impact?	Yes	

Annex N: Acronyms and Abbreviations

\$	US Dollar
ADMIRE	Adaptation Mitigation Readiness
BUR	Biennial Update Report
CCA	Climate Change Adaptation
CDM	Clean Development Mechanisms
CEB	Central Electricity Board
CWA	Central Water Authority
DRR	Disaster Risk Reduction
DTU	Denmark Technical University
EEMO	Energy Efficiency Management Office
FIRM	Facilitating Implementation and Readiness for Mitigation
GCF	Green Climate Fund
GEF	Global Environment Fund
GHG	Greenhouse Gas
GIS	Geographic Information System
IPCC	Intergovernmental Panel on Climate Change
LTES	Long term Energy Strategy 2009-2025
MEPU	Ministry of Energy & Public Utilities
MID	Maurice île Durable
MMS	Mauritius Meteorological Services
MoESDDBM	Ministry of Environment, Sustainable Development, Disasters and Beach Management
MoFED	Ministry of Finance and Economic Development
MoHL	Ministry of Housing and Lands
MRC	Mauritius Research Council
MRV	Monitoring, Reporting and Verification
NAMA	Nationally Appropriate Mitigation Actions
NATCOM	National Communications
NGOs	Non-Government Organizations
OFF	Operational Focal Point
PIF	Project Identification Form
PMO	Prime Minister's Office
PMU	Project Management Unit
PSC	Project Steering Committee
RE	Renewable Energy
ROM	Republic of Mauritius
SM	Statistics Mauritius
TNA	Technical Need Assessment
UDP	UNEP- DTU Partnership
UNEP	United Nation Environment Programme
UNFCCC	United Nation Framework Convention on Climate Change
WMA	Wastewater Management Authority
WRU	Water Resources Unit

APPENDIX 5: SUPERVISION PLAN (see also attached excel file)

Project Title:		Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy for Mauritius																																																					
Project number:		GFL/					PMS:/																																																
Project executing partner:		Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDBM)																																																					
Project implementation period (add additional years as required):		July 2011 to June 2015																																																					
Note: Plan should cover an additional 6 months after the project is completed to cover requirements for final reporting and terminal evaluation.		Year 1					Year 2					Year 3					Year 4					Year 5																																	
Month	Mth no	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Executing Agency		UNEPI/DIE																																																					
Activity/Task/Output																																																							
1 Inception meeting/workshop + report of meeting		[Green bar from M1 to M2]																																																					
2 Procure equipment		[Green bar from M2 to M3]																																																					
3 Hire consultants and project staff		[Green bar from M2 to M3]																																																					
4 Prepare sub-contracts (if required)		[Green bar from M2 to M3]																																																					
5 Establish M&E system		[Green bar from M2 to M3]																																																					
6 Expenditure report - Mar, Jun, Sep and Dec 31+ 30 days		[Green bars from M3 to M4, M5 to M6, M7 to M8, M9 to M10]																																																					
7 Progress report - Jun 30 + 30 days; Dec 31+ 30 days		[Green bars from M4 to M5, M10 to M11]																																																					
8 Annual co-financing report - Dec 31+ 30 days		[Green bar from M11 to M12]																																																					
9 Annual audit report - Dec 31+ 180 days		[Green bar from M12 to M13]																																																					
10 Annual non-expendable equipment report Dec 31+ 30 days		[Green bar from M12 to M13]																																																					
11 Year end review of project accounts Dec 31+ 60 days		[Green bar from M12 to M13]																																																					
12 Project Implementation Review (PIR) - Jun 30 + 30 days		[Green bar from M13 to M14]																																																					
13 Project revisions		[Green bar from M13 to M14]																																																					
14 Mid-term review/evaluation		[Green bar from M14 to M15]																																																					
15 Progress reports to co-financiers (where applicable)		[Green bars from M15 to M16, M17 to M18, M19 to M20, M21 to M22, M23 to M24, M25 to M26, M27 to M28, M29 to M30, M31 to M32, M33 to M34, M35 to M36, M37 to M38, M39 to M40, M41 to M42, M43 to M44, M45 to M46, M47 to M48, M49 to M50, M51 to M52, M53 to M54]																																																					
16 Project brochure/newsletter/banner		[Green bars from M15 to M16, M17 to M18, M19 to M20, M21 to M22, M23 to M24, M25 to M26, M27 to M28, M29 to M30, M31 to M32, M33 to M34, M35 to M36, M37 to M38, M39 to M40, M41 to M42, M43 to M44, M45 to M46, M47 to M48, M49 to M50, M51 to M52, M53 to M54]																																																					
17 GEFSEC communications (clear publications)		[Green bars from M15 to M16, M17 to M18, M19 to M20, M21 to M22, M23 to M24, M25 to M26, M27 to M28, M29 to M30, M31 to M32, M33 to M34, M35 to M36, M37 to M38, M39 to M40, M41 to M42, M43 to M44, M45 to M46, M47 to M48, M49 to M50, M51 to M52, M53 to M54]																																																					
18 Training workshops/seminars		[Green bars from M15 to M16, M17 to M18, M19 to M20, M21 to M22, M23 to M24, M25 to M26, M27 to M28, M29 to M30, M31 to M32, M33 to M34, M35 to M36, M37 to M38, M39 to M40, M41 to M42, M43 to M44, M45 to M46, M47 to M48, M49 to M50, M51 to M52, M53 to M54]																																																					
19 Project website design & development + updates/revamps		[Green bars from M15 to M16, M17 to M18, M19 to M20, M21 to M22, M23 to M24, M25 to M26, M27 to M28, M29 to M30, M31 to M32, M33 to M34, M35 to M36, M37 to M38, M39 to M40, M41 to M42, M43 to M44, M45 to M46, M47 to M48, M49 to M50, M51 to M52, M53 to M54]																																																					
20 Project steering committee meeting + minutes of meeting (some meetings thru teleconf)		[Green bars from M15 to M16, M17 to M18, M19 to M20, M21 to M22, M23 to M24, M25 to M26, M27 to M28, M29 to M30, M31 to M32, M33 to M34, M35 to M36, M37 to M38, M39 to M40, M41 to M42, M43 to M44, M45 to M46, M47 to M48, M49 to M50, M51 to M52, M53 to M54]																																																					
21 Site visits + mission reports		[Green bars from M15 to M16, M17 to M18, M19 to M20, M21 to M22, M23 to M24, M25 to M26, M27 to M28, M29 to M30, M31 to M32, M33 to M34, M35 to M36, M37 to M38, M39 to M40, M41 to M42, M43 to M44, M45 to M46, M47 to M48, M49 to M50, M51 to M52, M53 to M54]																																																					
22 Technical/substantive completion		[Green bar from M49 to M50]																																																					
23 Final report + outputs		[Green bar from M50 to M51]																																																					
24 Completion revision		[Green bar from M51 to M52]																																																					
25 Final audit report for project		[Green bar from M52 to M53]																																																					
26 Terminal evaluation		[Green bar from M53 to M54]																																																					
27 Return unspent funds (if applicable)		[Green bar from M54 to M55]																																																					
28 Closing revision		[Green bar from M55 to M56]																																																					

APPENDIX 6: PROCUREMENT PLAN

Project title:

Project number:

UNEP Budget Line		List of Goods and Services required	Budget (USD)	Year {Note 1}	Brief description of anticipated procurement process {Note 2}
1100	Project personnel				
1102	Project Manager	Oversee the coordination and implementation of activities of the Project. Support the implementation of components 1 and 3 related to Building national capacities for NAMAs and Establishment of national MRV system and registry. (see appendix 7 for further details)	102,000	2016-2019	Solicitation of offers, selection based on national criteria
	Sub Total		102,000		
1200	Consultants				
1201	National statistical expert	support the MRV related work across components 2 and 3 of the project. (see appendix 7 for further details)	30,000	2016-2019	Solicitation of offers, selection based on national criteria
1202	Data collection and GHG modelling expert	support the implementation of components 1 of the project. (see appendix 7 for further details)	20,000	2016-2017	Solicitation of offers, selection based on national criteria
1203	National sectoral expert for programmatic approach	support the implementation of components 1 and 3 of the project. (see appendix 7 for further details)	20,000	2016-2017	Solicitation of offers, selection based on national criteria
1204	National finance expert	support the finance related work across component 2 of the project. (see appendix 7 for further details)	20,000	2016-2018	Solicitation of offers, selection based on national criteria
1206	Renewable energy expert	support the implementation of component 2 of the project. (see appendix 7 for further details)	50,000	2016-2019	Solicitation of offers, selection based on national criteria
1207	Gender Expert	support gender mainstreaming aspect in the project. (see appendix 7 for further details)	10,000	2016-2018	Solicitation of offers, selection based on national criteria
	Sub Total		150,000		
1300	Administrative support				
1301	Administrative Assistant	supports logistics, correspondence, recruitment of personnel, day-to-day administrative requirements of the project, and the overall operational and financial management and reporting. (see appendix 7 for further details)	33,000	2016-2019	Solicitation of offers, selection based on national criteria
	Sub Total		33,000		
1600	Travel on official business				
1601	Site visits and meetings	fuel and meeting arrangements during site visits	15,000	2016-2019	direct purchase
1602	Overseas travels	participation of project representatives in international events/forum to diffuse project results and lesson learned	15,000	2017 and 2019	direct purchase
	Sub Total		30,000		

2100	Sub-contracts (MOUs/LOAs for cooperating agencies)				
2101	Provide advice on MRV institutional development	advices on development of MRV system at national level	20,000	2017-2018	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2102	Develop processes, procedures and guidances for Domestic MRV system	development of guidance on roles, responsibilities and procedures for measure, report and verification processes	22,500	2017-2018	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2103	Provide capacity development on MRV	training of national counterparts on MRV concept	22,500	2017-2018	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2104	Provide advice on Monitoring plan for electricity generation sector	advices on development of measurement plan for electricity generation sector including indicators, methods, responsibilities, timing and periodicity,...	10,000	2017-2019	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2105	Provide advice on establishing coordinating entity	advices on structure, roles and responsibilities of coordinating entity	28,000	2016-2017	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2106	Provide advice and guidance on BAU development and national voluntary target	advices on methods and calculation for the development of BAU scenario for NAMAs as well as on the establishment of a national voluntary target	20,000	2016-2017	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2107	Provide advice on MAC development and on mitigation opportunities	advices on identifying potential mitigation actions in the different sectors as well as on the development of MAC curves for the proposed actions	20,000	2017	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2108	Guide and advice on accessing international finance	advices on the international finance structure and access including identification of potential international finance providers and their requirements	10,000	2018-2019	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2109	Provide guidance on programmatic approach	advices on the development of a programmatic approach for NAMAs	20,000	2016-2017	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2110	Guide development of NAMA Registry	development of guidance for the establishment and operationalization of a NAMA registry at national level	15,000	2017	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
2111	Provide advice and guidance on development of NAMA	advices on the use of MCA tool for NAMA prioritization including identification of	20,000	2017	Services supplied by the cooperating agencies will be covered through MOU/Contract at

	prioritization framework	prioritization criteria based on national priorities.			the start of the project.
2112	Develop NAMA to promote wind electricity and financing for RE projects	development of NAMA document including key components: BAU and NAMA scenarios, barriers and action plan, MRV plan for the NAMA, finance architecture for the NAMA	170,000	2016-2019	Services supplied by the cooperating agencies will be covered through MOU/Contract at the start of the project.
	Sub-Total		378,000		
2200	Sub-contracts (MOUs/LOAs for supporting organizations)				
2201	IT support for NAMA registry and database development	establishment of electronic database and network for NAMA registry	97,500	2017-2019	Procurement through call for proposals and selection based on technical and cost criteria.
2202	Regulatory, legal and policy framework review and recommendation to promote private sector participation	an analysis of the current national regulatory, legal and policy framework for private sector participation in energy sector and in particular for electricity generation as well as recommendations	75,000	2017-2018	Procurement through call for proposals and selection based on technical and cost criteria.
2203	RE resource mapping and development of resource map	an analysis of RE potential and mapping of RE technologies potential in the country	170,000	2017-2018	Procurement through call for proposals and selection based on technical and cost criteria.
2204	Review and recommendation of electricity project approval process	an analysis of the national rules (regulations and laws) and procedures for electricity generation projects	50,000	2017-2018	Procurement through call for proposals and selection based on technical and cost criteria.
2205	RE grid integration and smart grid development strategy	a strategy for the integration of RE technologies for generation of electric power into the grid	95,000	2017-2018	Procurement through call for proposals and selection based on technical and cost criteria.
	Sub-Total		487,500		
3200	Group training				Solicitation of offer from national organization for supporting organization of trainings.
3201	MRV training	logistic arrangements for training	10,000	2017-2018	
3202	NAMA training	logistic arrangements for training	10,000	2016	
3203	Programatic and prioritization framework	logistic arrangements for training	10,000	2016	
3204	Dissemination of institutional arrangements	logistic arrangements for training	5,000	2017	
3205	Training of financial sector on NAMAs	logistic arrangements for training	10,000	2017-2018	

	Sub-Total		45,000		
3300	Meetings/Conferences				
3302	Stakeholders consultation	logistic arrangements for consultation process	20,000	2016-2019	direct purchase (meeting rooms, café, lunches)
	Sub-Total		20,000		
4100	Expendable equipment				
4101	Office supplies	material and supplies regularly used as paper, writing utensils, staplers, post-it,...	4,000	2016-2019	Solicitation of offers, selection based on national criteria
	Sub-Total		4,000		
4200	Non-expendable equipment				
4201	Office equipment & IT	computers and printers	17,000	2016-2017	Solicitation of offers, selection based on national criteria
4202	GIS related software	software for GIS in particular for RE mapping	100,000	2016	Solicitation of offers, selection based on national criteria
	Sub Total		117,000		
5200	Reporting costs				
5201	Audit	audit of the project	4,000	2019	Solicitation of offers, selection based on national and UNEP criteria
5202	Printing	printing of key publications and reports of the project	16,500	2016-2019	Solicitation of offers, selection based on national criteria
	Sub Total		20,500		
5500	Evaluation				
5501	Mid-term	evaluation of the project	35,000	2017-2018	Solicitation of offers, selection based on national and UNEP criteria
5502	Terminal evaluation	evaluation of the project	30,000	2019	Solicitation of offers, selection based on national and UNEP criteria
	Sub Total		65,000		
	GRAND TOTAL		1,452,000		

Note 1 - Year when goods/services will be procured

Note 2 - Based on your organization's procurement procedures, and in compliance with UNEP rules and procedures, briefly explain how the service provider/consultant/vendor will be selected

APPENDIX 7: TORS OF PROJECT PERSONNEL

TERMS OF REFERENCE FOR PROJECT MANAGEMENT TEAM

POST TITLE: PROJECT MANAGER

- **Date Required:** all project implementation period
- **Duty station:** Mauritius
- **Counterpart:** Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)
- **Background:** The project manager oversees the coordination and implementation of activities of the Project, under the supervision of the National Project Director. In addition, the project manager supports the implementation of components 1 and 3 related to Building national capacities for NAMAs and Establishment of national MRV system and registry. He will directly supervise the work of the Administrative Assistant.
- **Key responsibilities:**
 - Overall management as well as review of activities and monitoring of key project consultants, staffers and sub-contractors
 - Plan and organize all project related meetings, in close coordination with relevant Authorities and ensure all project activates and stakeholders are duly coordinated
 - Ensures the active follow-up and development of linkages with correspondent similar initiatives
 - In charge of coordination the compilation and updating of annual reports, half yearly reports and financial reports
 - Review and provide key input of key outputs of the project, including market survey and assessment studies, business plans
 - Responsible for reporting to UNEP and as well as to steering committee
 - Provides direction and overall management to the project office
 - Takes overall responsibility for the management and execution of the project
 - Ensure that the activities are carried out according to the project design and the outcomes and outputs/deliverables are achieved to the required standard of quality within the approved timeframe and budget
 - Help in organizing of training programs, ensure adequate participation and quality of reports
- **Reporting structure -** The project manager will work under the general supervision of and report to the National Project Director.
- **Qualifications**
 - Minimum of University degree in Science or Engineering and post-graduate
 - Masters Degree in Management or a Masters in Business Administration
 - Minimum 10 years experience in the energy sector and minimum 7 years in managing a regional/local energy-related organization/agency or program
 - Extensive knowledge of energy sector, regulation and reform, energy policy
 - Evidence of published books or journal articles or reports on energy sector, regulation and reform, energy policy , social issues etc
 - Knowledge of UNEP/GEF facility as well as associated GEF Climate Program priorities, project preparation and implementation mechanisms would be an advantage.
 - Knowledge and experience in working with government and private sector in Mauritius
 - Good contacts in key institutions including power utilities, regulatory bodies, private energy companies, government ministries etc.
 - Demonstrated ability in managing a multi-disciplinary team
 - Ability and willingness to travel at short notice
 - Adequate computer literacy.
- **Languages:** Fluent in English (speaking and writing)

POST TITLE: ADMINISTRATIVE ASSISTANT

- **Duty station:** Mauritius
- **Counterpart:** Ministry of Environment, Sustainable Development, Disasters and Beach Management (MoESDDBM)
- **Background:** The Administrative Assistant supports logistics, correspondence, recruitment of personnel, day-to-day administrative requirements of the project, and the overall operational and financial management and reporting.
- **Key responsibilities:**

- Design, implementation and updating of project accounting system
 - Preparing regular financial reports
 - Reviewing and processing project payments and ensuring overall effective management of project accounts
 - Support UNEP in financial reporting
 - Any other tasks assigned by the project manager
 - Build and update a database of project partners contacts as well as any others relevant individual or institution in relation to the project;
 - Organize meetings of the project steering committee and maintain records of the events including dates, list of participants, and minutes of meetings;
 - Maintain files of all project documentation;
 - Maintain records and report expenses
 - Maintain agendas for team members and remind them with regard to date for reporting, etc.
 - Liaise with UNEP on any matter of relevance to the work
 - Report on the main issues and difficulties encountered so that lessons can be drawn with regard to the successive similar projects.
- **Reporting structure** - The Administrative Assistant will work under the general supervision of and report to the project manager.
 - **Qualifications:**
 - Minimum of University degree in Accounts
 - Minimum 5 years experience of work in large organization/agency or program
 - Experience in working on international projects would be an asset.
 - Excellent oral and written communication skills in English
 - Adequate computer literacy.
 - **Languages:** Fluent in English (speaking and writing)