



ADAPTATION FUND

AFB/PPRC.1/6
June 2, 2010

Adaptation Fund Board
Project and Programme Review Committee
First Meeting
Bonn, June 14, 2010

PROJECT/PROGRAMME PROPOSAL FOR MAURITIUS

I. Background

1. The Operational Policies and Guidelines for Parties to Access Resources from the Adaptation Fund, adopted by the Adaptation Fund Board, state in paragraph 41 that regular adaptation project and programme proposals, i.e. those that request funding exceeding US\$ 1 million, would undergo either a one-step, or a two-step approval process. In case of the one-step process, the proponent would directly submit a fully-developed project proposal. In the two-step process, the proponent would first submit a brief project concept, which would be reviewed by the Project and Programme Review Committee (PPRC) and would have to receive the approval by the Board. In the second step, the fully-developed project/programme document would be reviewed by the PPRC, and would finally require Board's approval.

2. The Templates Approved by the Adaptation Fund Board (Operational Policies and Guidelines for Parties to Access Resources from the Adaptation Fund, Annex 3) do not include a separate template for project and programme concepts but provide that these are to be submitted using the project and programme proposal template. The section on Adaptation Fund Project Review Criteria states:

For regular projects using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project concept. In addition, the information provided in the 1st step approval process with respect to the review criteria for the regular project concept could be less detailed than the information in the request for approval template submitted at the 2nd step approval process. Furthermore, a final project document is required for regular projects for the 2nd step approval, in addition to the approval template.

3. The first four criteria mentioned above are:

1. Country Eligibility,
2. Project Eligibility,
3. Resource Availability, and
4. Eligibility of NIE/MIE.

4. Based on the Adaptation Fund Board Decision B.9/2, the first call for project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Adaptation Fund was sent out on April 8, 2010.

5. According to the paragraph 41 of the operational policies and guidelines, a project or programme proposal needs to be received by the secretariat not less than seven weeks before a Board meeting, in order to be considered by the Board in that meeting.

6. The following project concept titled "Adapting Coastal Zone Management to Address the Impacts of Climate Change" was submitted by the United Nations Development Programme (UNDP), which is a Multilateral Implementing Entity of the Adaptation Fund. It was received by the secretariat before the closing date for consideration of projects in the 10th Adaptation Fund Board meeting. The secretariat has carried out a technical review of the project concept and assigned to it the diary number AFB/MIE/Coastal/2010/2, and is submitting to the Project and Programme Review Committee the following documents:

1. Summary of the project, prepared by the secretariat.
2. The technical review sheet, filled in by the secretariat.
3. The original concept, as submitted (in Annex).

II. Recommendation

7. The PPRC may want to consider and recommend to the Board:

- a) To endorse the project concept, contained in the Annex; and
- b) To communicate to UNDP a list of specific issues that would need to be clarified within the project proposal. A list of such issues, suggested by the secretariat, is included in the technical review sheet.

1. Project Summary

Mauritius – Adapting Coastal Zone Management to Address the Impacts of Climate Change

Implementing Entity: *UNDP*

Executing Entity: *Ministry of Environment, National Development Unit*

Project execution cost: USD 500,000

Total project cost (execution included): USD 8,400,000

UNDP management fee: USD 840,000 (10%)

Total amount of financing requested: USD 9,240,000

Project Background and Context: Direct climate change impacts likely to adversely affect the islands of the Republic include an increase in mean annual temperature of up to 4°C by 2100, a declining trend in total annual rainfall but an increase in the frequency of intense rainfall episodes, sea-level rise, and an increase in intensity and the rate of intensification of cyclones. The coastal zone plays a vital role in protecting settlements, infrastructure, agriculture and important ecological systems from climate-related hazards. Coastal zone impacts will undermine coastal development, which will hinder the foundation of a proposed increase in tourism, a government intended pillar of the economy. The objective of the project is to ensure that future development in coastal areas is sustainable in the face of climate change by integrating climate change risks into coastal zone management (CZM) planning frameworks, enhancing the capacity of the public and private sectors in Mauritius and Rodrigues to develop and implement sustainable adaptive approaches to CZM, and piloting specific adaptation measures at demonstration sites.

Component 1: Policy mainstreaming (USD 700,000)

The expected outcome of this component is the integration of climate change risks into national coastal development strategies and plans. This component will update planning regulations and enable the development of a National Adaptation Strategy (NAS), which a Steering Committee will establish and oversee, for the coastal zone. The component will increase adaptive capacity by undertaking a gap analysis in the policy, fiscal, regulatory and legal frameworks at the national level. The component will also find weaknesses in monitoring and enforcement mechanisms and will provide assistance in the development of mechanisms to prohibit maladaptive development. Weakness in organizational arrangements and staff incentives that prevent adaptation replication will be identified and an action plan addressing these barriers will be developed.

Component 2: Capacity development for adaptation planning (USD 500,000)

The expected outcome of this component is the strengthening of institutional and individual capacities to implement integrated CZM. This includes training for stakeholders in climate risk management focusing on the coastal zone. A handbook will be developed on adaptation methods for CZM.

Component 3: Demonstration projects (USD 6,500,000)

The expected outcome of this component is the testing and evaluation of innovative adaptation measures for replication across the islands. The component will focus on

adaptation in the context of the development of the tourism sector including: reef restructuring and rehabilitation where reef damage threatens to expose the shoreline to erosion; integration of mangroves into hotel/resort design and development in order to increase the physical resilience of developed coastline; piloting resort building on piles and stilts in order to minimize the impacts of development on coastal dynamism, integrating rainwater capture and storage system into resort design and the promotion of building designs that reduce the need for air condition to reduce pressure on energy resources.

Component 4: Knowledge management (USD 200,000)

The expected outcome of this component is the successful replication of adaptation approaches, helped by the dissemination of adaptation learning from the project. Knowledge products will be developed for policy makers, communities and donors. Learning will be disseminated through established mechanisms. A public awareness campaign will be developed and implemented. Learning will be captured and disseminated through science and policy networks. A replication plan will be developed as well.



ADAPTATION FUND

2. ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT CATEGORY: **REGULAR-SIZED PROJECT CONCEPT**

Country/Region: **Mauritius**

Project Title: **Adapting Coastal Zone Management to Address the Impacts of Climate Change**

AF Project ID: AFB/MIE/Coastal/2010/2

NIE/MIE Project ID:

Requested Financing from Adaptation Fund (US Dollars): **9,240,000**

Regular Project Concept Approval Date (if applicable): **n/a** Anticipated Submission of final RP document (if applicable):

AFB Secretariat Screening Manager: **Mikko Ollikainen**

NIE/MIE Contact Person: **Jessica Troni**

Review Criteria	Questions	Comments
Country Eligibility	1. Is the country party to the Kyoto Protocol?	Yes.
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	Yes.
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project?	Yes (letter dated 26 April 2010).
	2. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	Yes. Majority of proposed funding is in Component "Demonstration Projects", which aims to pilot "innovative adaptation measures", including physical investments to reef protection, mangrove development, resort design, rainwater capture and storage, and energy conservation through building design.
	3. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities?	Yes. The concept illustrates environmental, economic and social benefits. As a SIDS, Mauritius can be considered vulnerable as a whole but the concept does not specify how the project would address the most vulnerable communities in the country in particular. A sector that was not mentioned in the concept is waste water management, which should be an important part of integrated coastal zone management (ICZM), especially in the setting of projected sea-level rise and coastal livelihoods that are vulnerable to pollution from coastal sources. The concept should explain whether this sector is covered by other initiatives and how the proposed project would be linked with those.

	4. Is the project / programme cost effective?	Requires clarification. "Detailed cost effectiveness analysis will be undertaken at the project design phase for approval of the Adaptation Board."
	5. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	Yes. The concept references several national policies and strategies with which the project would be in line. (Note: Screening did not look into those policies in depth yet.)
	6. Does the project / programme meet the relevant national technical standards, where applicable?	Requires clarification."These will be elaborated in the project document phase for approval of the Adaptation Board."
	7. Is there duplication of project / programme with other funding sources?	Requires clarification. "Duplication will be avoided. Complementarity and collaboration will be sought with interventions and projects in the pilot areas. This will be fully scoped during the project development phase for approval of the Adaptation Board." Such interventions might include e.g.: "Maurice, Ile Durable" financed by AFD, "Africa Adaptation Programme" financed by UNDP and Japan, "EU's Global Alliance for Climate Change", and "Project to reinforce the capacity of members of the IOC to adapt to climate change" financed by IOC.
	8. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	Yes. This is well developed in the concept. However, the proposed approach relies on internet-based (ALM, wikiADAPT) and human network based (scientific, policy-based and other) information dissemination methods, and reports. In a country like Mauritius with relatively short distances within islands and high importance of (privately-operated) tourism, a show-casing approach in the form of demonstration sites might be useful: such sites could be used to disseminate best practices within the tourism industry and other sectors.
	9. Is the requested financing justified on the basis of full cost of adaptation reasoning?	Requires a more detailed budget break-down. Also, the main parts of hard investment are described in two different ways in the concept, without clear explanation of how they relate to each other: In Part II, Criterion I (justification for funding), two sizeable investments are mentioned: "Design, tendering, construction and supervision of wave breaker at Riviere des Galets" (4,000,000 USD) and "Design, tendering, construction and supervision of coastal rehabilitation work at Mon Choisy" (2,000,000 USD). However, Part II, Criterion A (description of project components),

		references more broad-based interventions: “long-term adaptation measures in collaboration with one or more private sector developers, relevant government bodies and NGOs at one or more demonstration sites, focusing on adaptation in the context of the development of the tourism sector, and including: (i) reef restructuring and rehabilitation using artificial structures in areas where reef damage threatens to expose the shoreline to intensified erosion; (ii) integration of mangroves into hotel/resort design and development in order to increase the physical resilience of developed coastline; (iii) piloting resort building on piles/stilts in order to minimize the impact of development on coastal dynamism and vice versa, (iv) integrating rainwater capture and storage systems into resort design to reduce pressure on declining water resources and buffer resorts from water shortages, (v) promoting building designs that reduce the need for air conditioning to reduce pressure on energy resources and reduce the vulnerability of tourist developments to power shortages in a climate characterized by higher temperatures and more severe storms (and therefore more frequent heat waves and disruptions to energy supplies).”
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	n/a (No cap decided yet)
Eligibility of NIE/MIE	2. Is the project submitted through an eligible NIE/MIE that has been accredited by the Board?	Yes.
Implementation Arrangement	1. Is there adequate arrangement for project / programme management?	n/a (Not required in Project Concept phase)
	2. Are there measures for financial and project risk management?	n/a (Not required in Project Concept phase)
	3. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans?	n/a (Not required in Project Concept phase. There is an indicative M&E work plan and corresponding budget but clear measurable success indicators are not developed yet.)
	4. Is a results framework included?	n/a (Not required in Project Concept phase)
Technical Summary	The project objective is to ensure that future development in coastal areas is sustainable in the face of climate change by (i) integrating climate change risks into coastal zone management (CZM) planning frameworks, (ii) enhancing the capacity of the public and private sectors in Mauritius and Rodrigues to develop and implement sustainable, adaptive approaches to CZM, and (iii) piloting specific adaptation measures at demonstration sites. The proposed AF project will implement priority adaptation options as identified in the Government of Mauritius' White Paper on National Environmental Policy (2006), the NES, the ESA, the National Development Strategy, volumes 1 and 2 (2003), and the National Communication to the UNFCCC.	

	<p>The components of the project are:</p> <ol style="list-style-type: none">1. Policy mainstreaming, US\$ 700,000.2. Capacity development for adaptation planning, US\$ 500,000.3. Demonstration projects, US\$ 6,500,000.4. Knowledge management, US\$ 200,000. <p>The project concept follows a rational pattern of combining the above four measures. The main part of the grant is envisaged to be spent to demonstration projects. However, the concept seems to provide two somewhat different plans on what that would be spent on, which will require further clarification (see above). The proposal is well-grounded in understanding of the operating environment and possible links with other initiatives. However, there are several on-going adaptation initiatives in Mauritius, and their relationships at the component level need to be described more specifically.</p> <p>Main concerns:</p> <ol style="list-style-type: none">1. Main parts of hard investment in the proposed project are described in two different ways in the concept, without clear explanation of how they relate to each other. The plan would need to be clarified in this respect, and reflected in budget.2. The concept does not explain clearly who the primary beneficiaries are or how they are selected.3. The concept should explain whether coastal waste water management is covered by other initiatives and how the proposed project would be linked with those4. The concept should clarify the approach to knowledge dissemination, and explore possibilities of complementing expert-focused methods with ones that are more easily accessible to tourism operators and other local stakeholders.
Date:	June 2, 2010



PROJECT/PROGRAMME PROPOSAL

PART I: PROJECT/PROGRAMME INFORMATION



PROJECT/PROGRAMME CATEGORY:	Regular
COUNTRY/IES	Mauritius
TITLE OF PROJECT/PROGRAMME	Adapting Coastal Zone Management to Address the Impacts of CC
TYPE OF IMPLEMENTING ENTITY	MIE
IMPLEMENTING ENTITY:	UNDP
LEAD EXECUTING ENTITY:	Ministry of Environment, National Development Unit
AMOUNT OF FINANCING REQUESTED:	\$9,240,000

PROJECT / PROGRAMME BACKGROUND AND CONTEXT:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

- The islands within the Republic of Mauritius (ROM) (including Mauritius, Rodrigues and Agalega) are likely to experience considerable economic loss, humanitarian stresses and environmental degradation as a result of climate change impacts. The direct climate change impacts likely to adversely affect ROM include:
 - an increase in mean annual temperature of up to 4°C by 2100ⁱ;
 - a declining trend in total annual rainfall, but an increase in the frequency of intense rainfall episodes^{ii,iii};
 - sea-level rise (SLR) of 18 – 59cm by 2100^{iv};
 - an increase in intensity and the rate of intensification of tropical cyclones^{v,vi}.
- Exacerbating these impacts are the inherent environmental vulnerabilities of Small Island Developing States (SIDS), which include small land area¹, susceptibility to natural

¹ The land area of SIDS, such as ROM, is scarce and therefore the ability to retreat inland to avoid maritime hazards is limited.

disasters², geographical isolation, limited natural resources and sensitive ecosystems^{vii}. Further compounding the situation are existing unsustainable practices and environmental problems (such as coastal erosion, sand mining³ and soil erosion). The Initial National Communication (INC) of The Republic of Mauritius (1999) identified the following important sectors as most likely to be affected by the abovementioned climate change impacts: i) coastal resources; ii) agriculture; iii) water resources; iv) fisheries; v) health and well-being; vi) land-use change and forestry; and vii) biodiversity.

3. The coastal zone of Mauritius (including Rodrigues and the outlying islands) plays a vital role in protecting settlements, infrastructure, agriculture and important ecological systems from climate-related hazards. Offshore lagoons, which consist of complexes of coral reefs, dissipate wave energy, protecting the shoreline from erosion. In the intertidal zone and onshore, systems such as mangroves, wetlands and vegetated dunes represent a second line of defence against coastal erosion, which tends to occur in an episodic fashion, particularly during tropical storm events.

4. Climate change is already associated with observed sea-level rise and a trend towards more destructive storms. A number of coastal areas whereby impacts of climate change are being experienced with significant damage to infrastructure and threat to life have been identified. Preliminary measures have been implemented to partly contain the impacts. Additional work needs to be carried out to reinforce the interim protection at a few critical sites. These trends are expected to continue over the foreseeable future, accelerating coastal erosion and increasing the risk of inundation and permanent loss of land. These expected impacts could be exacerbated by a reduction in the protective function of fringing coral reefs as these systems are damaged by ocean acidification and an increased incidence of high temperatures associated with bleaching events. Loss of coral in lagoon areas will have an adverse impact on marine resources. Onshore, lower mean annual rainfall, higher air temperatures, and an increase in the intensity of individual rainfall events are already associated with increases in the risk of water shortages, fires, soil erosion, localized flooding and associated damage to infrastructure. More frequent drought and more intense storms are expected to increase the likelihood and severity of disruption to energy (specifically hydro and bagasse), and food supplies.

5. These expected climate change impacts have the potential to undermine future coastal (and indeed national) development, the foundation of which is a proposed increase in the number of tourists visiting Mauritius from some 800,000 at present to 2 million by 2015. The government's intention is to make tourism, which currently generates some 5% of GDP, the main pillar of the economy in order to compensate for declining revenues from sugar production and the export processing zone. While the Mauritian government has implemented a number of measures to address vulnerability to existing climate hazards (including successfully banning sand extraction from the lagoon area in 2001, increasing setback from 15m to 35m of the high-water mark, mangrove rehabilitation, recommending a maximum ground coverage by buildings of 20% for new developments, and establishing an integrated coastal zone management (ICZM) committee under the Ministry of Environment), these measures alone are not sufficient to secure development in the face of climate change. Unless this expansion of tourism accommodates the inevitable impacts of climate change on coastal morphology and is based on development that maintains or enhances the resilience of coastal systems to climate change, it is likely to be unsustainable and even maladaptive.

² The vulnerability of ROM is enhanced as a result of the constant threat of natural disasters such as storm surges, tropical cyclones as well as drought and flooding events.

³ Sand mining within the lagoon surrounding Rodrigues is still legal, but is poorly monitored (National Biodiversity Strategy and Action 2006 – 2015: Chapter 6 Rodrigues).

There is therefore an urgent need to incorporate adaptation measures in planning frameworks, and to integrate climate change risks into current approaches to coastal zone management, in the early stages of the planned expansion of tourism infrastructure.

5. As the first country to ratify the United Nations Framework Convention on Climate Change (UNFCCC), ROM is aware of the multitude of risks posed by climate change^{viii}. As a result, there are a number of *ad hoc* projects in existence on the islands principally focused on ecosystem restoration, the re-introduction of native flora and fauna, and addressing the impacts of SLR. However, these projects are limited in scope and scale and are isolated from underlying development, preventing their effects from being widespread, cohesive and sustainable. Additional funding is required to catalyse and upscale such projects to support integrated adaptation that will promote long-term sustainability and resilience to climate change.

6. To date, there are no coherent strategies in place at the national level to deal with the adaptation and mitigation of climate change impacts in Mauritius, and the country lacks targeted policies to address the impacts of climate change decisively. At best, there are *ad hoc* projects (often carried out in a disaggregated manner) that have not been tailored for addressing impacts of climate change directly (see paragraph 3). One example would be the projects that aim to reduce beach erosion resulting from non-climate drivers, but that inadvertently reduce the vulnerability of beaches to enhanced erosion as a consequence of SLR. Even where there are such projects, there is inadequate capacity for their implementation as a result of numerous reasons, including: i) lack of technical capacity to formulate projects; ii) poor monitoring and enforcement; iii) budgetary gaps; iv) inadequate institutional frameworks; and v) the lack of pertinent knowledge of the adverse impacts of climate change. Because of the last reason, adaptation to climate change has been relegated to a lower national priority⁴.

PROJECT / PROGRAMME OBJECTIVES:

To ensure that future development in coastal areas is sustainable in the face of climate change by (i) integrating climate change risks into coastal zone management (CZM) planning frameworks, (ii) enhancing the capacity of the public and private sectors in Mauritius and Rodrigues to develop and implement sustainable, adaptive approaches to CZM, and (iii) piloting specific adaptation measures at demonstration sites. The proposed AF project will implement priority adaptation options as identified in the Government of Mauritius' White Paper on National Environmental Policy (2006), the NES, the ESA, the National Development Strategy, volumes 1 and 2 (2003), and the National Communication to the UNFCCC.

PROJECT / PROGRAMME COMPONENTS AND FINANCING:

PROJECT COMPONENTS	EXPECTED CONCRETE OUTPUTS	EXPECTED OUTCOMES	AMOUNT (US\$)
Policy mainstreaming	1. Apply climate change Strategic Environmental Assessment (SEA) approach to screen and update planning regulations and enable the	CC risks integrated into national coastal development	\$700,000

⁴ This could also be due to the evolution of the debate about climate change, where its mitigation has received more attention as the science of climate change has unfolded. (

	<p>development of a National Adaptation Strategy for the coastal zone.</p> <p>2. Identify gaps in policy, fiscal, regulatory and legal frameworks and weaknesses in monitoring and enforcement mechanisms and identify corrective measures (including Payment for Ecosystem Services);</p> <p>3. Identify and address weaknesses in organizational arrangements and incentives that prevent adaptation from being replicated.</p>	strategies and plans	
Capacity development for adaptation planning	<p>1. Training carried out for stakeholders in climate risk management with a particular focus on coastal zone;</p> <p>2. Multi-disciplinary Handbook on adaptation methods for coastal zone management developed as a joint product of relevant ministries, local government, NGOs and civil society organizations.</p>	Institutional and individual capacities to implement integrated coastal zone management in response to climate change impacts strengthened.	\$500,000
Demonstration projects	<p>1. Undertake financial and technical feasibility studies of proposed interventions.</p> <p>2. Participatory plan developed</p> <p>3. Pilot innovative adaptation measures in collaboration with private sector developers, relevant Govt bodies and NGOs focusing on coastal management.</p>	Innovative adaptation measures tested and evaluated, for replication on RoM.	\$6,500,000
Knowledge management	<p>1. Knowledge products developed on lessons learned for policy makers, communities and donors throughout the project.</p> <p>2. Learning disseminated through mechanisms established through the AAP programme.</p> <p>3. Public awareness campaign developed and implemented, in collaboration with the AAP programme.</p> <p>4. Learning captured and disseminated in science and policy networks, including ALM.</p> <p>5. Replication plan developed, in collaboration with adaptation financial plan developed in the AAP project.</p>	Successful adaptation approaches replicated, helped by dissemination of adaptation learning from project.	\$200,000
6. Project/Programme Execution cost			\$500,000
7. Total Project/Programme Cost			\$8,400,000
8. Project Cycle Management Fee charged by the Implementing Entity (if applicable)			\$840,000

Amount of Financing Requested	\$9,240,000
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PROJECTED CALENDAR:

Indicate the dates of the following milestones for the proposed project/programme

MILESTONES	EXPECTED DATES
Start of Project/Programme Implementation	February 2011
Mid-term Review (if planned)	February 2014
Project/Programme Closing	February 2016
Terminal Evaluation	November 2015

PART II: PROJECT / PROGRAMME JUSTIFICATION

- A. Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

Outcome (1): Climate change risks integrated into national coastal development strategies and plans

The Project will assist the Republic of Mauritius will update planning regulations and enable the development of a National Adaptation Strategy (NAS) for the coastal zone using the SEA process. The NAS will focus on ensuring the sustainability of coastal development. The Project will increase adaptive capacity at the national level by identifying gaps in the policy, fiscal, regulatory and legal frameworks and weaknesses in monitoring and enforcement mechanisms, and providing assistance in the development of mechanisms to prohibit and discourage maladaptive development. Corrective measures that can promote adaptation (including Payment for Ecosystem Services) will be scoped. A Steering Committee will be established to coordinate with the SEA and oversee preparation of the NAS, consisting of key stakeholders and relevant experts, and including members of the existing ICZM, whose influence and mandate will be strengthened by measures to improve cooperation across government departments and between government and the private sector.

Weaknesses in organizational arrangements and staff incentives that prevent adaptation from being replicated will be identified. An action plan for addressing these barriers will be developed.

Outcome (2): Institutional and individual capacities to implement integrated coastal zone management in response to climate change impacts strengthened

Training for stakeholders in climate risk management with a particular focus on coastal zone will be carried out, in conjunction with similar activities undertaken under the AAP project, to

maximize efficiencies. A multi-disciplinary Handbook on adaptation methods for coastal zone management will be developed as a joint product of relevant ministries, local government, NGOs and civil society organizations. The process of development will encourage cross-sectoral collaboration and joint-working, thus building capacity and overcoming some of the cultural barriers that prevent joined-up decision making.

Outcome 3: Innovative pilots for adaptation measures implemented

The Project will pilot innovative long-term adaptation measures in collaboration with one or more private sector developers, relevant government bodies and NGOs at one or more demonstration sites, focusing on adaptation in the context of the development of the tourism sector, and including: (i) reef restructuring and rehabilitation using artificial structures in areas where reef damage threatens to expose the shoreline to intensified erosion; (ii) integration of mangroves into hotel/resort design and development in order to increase the physical resilience of developed coastline; (iii) piloting resort building on piles/stilts in order to minimize the impact of development on coastal dynamism and vice versa, (iv) integrating rainwater capture and storage systems into resort design to reduce pressure on declining water resources and buffer resorts from water shortages, (v) promoting building designs that reduce the need for air conditioning to reduce pressure on energy resources and reduce the vulnerability of tourist developments to power shortages in a climate characterized by higher temperatures and more severe storms (and therefore more frequent heatwaves and disruptions to energy supplies).

The project development phase will put together a short-list of potential adaptation measures that could be piloted as a result of existing information and stakeholder consultations. The first phase of project implementation would be to carry out a technical and financial feasibility assessment of the short-listed interventions to choose the pilots that are likely to be most cost-effective. Participatory planning will be a key feature of the approach taken to implement the pilot interventions. A *ex-post* cost-effectiveness analysis will be conducted as part of the monitoring and evaluation process during project implementation.

Barriers to adaptation to be addressed

The recent UNDP-GEF Capacity Needs Assessment highlighted a multitude of capacity weaknesses that inhibit adaptation to climate change in RoM. While there are extensive reports prepared by consultants and the government has committed some funds for action on coastal issues, the capability to effectively implement many of the technical recommendations is limited.

The project will address these barriers to adaptation, which include: (a) insufficient information, (b) limited technical capacity to respond to the problems, and (c) weaknesses in institutional coordination and mechanisms for comprehensive environmental planning. Institutional coordination is particularly important for land management in the coastal zone.

Inter-agency working relationships are inhibited by traditional organizational barriers to integrated approaches, including the tendency for single sector and discipline approaches, unwillingness to share data, organizational competition for funds between agencies and little coordination of government and NGO sectors in the environment. The proposed project will build more formal links between governing authorities, and provide training and reference materials to promote joint participation of government and non-government organizations in improved coastal management.

B. Describe how the project / programme provides economic, social

and environmental benefits, with particular reference to the most vulnerable communities.

The proposed project will act as a demonstration project for incorporating climate change adaptation measures into ICZM, and will generate valuable lessons for coastal zone adaptation and its relationship to development planning and disaster risk management in small island states, not only for Mauritius but for other nations facing similar climate change related threats.

Specific benefits are expected to include sustainability of tourism sector investments, protection of the livelihoods and assets of coastal communities, protection of water resources from expected climate change impacts, helping to maintain health status of coastal communities. In this way, the project is expected to protect the achievement of MDGs 1 (poverty reduction), 7 (environmental sustainability) and MDGs 4 and 6 (“Reduce child mortality” and “Combat HIV/AIDS, malaria and other diseases”, respectively).

Benefits will be measured, tracked and reported during project implementation.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.

Detailed cost effectiveness analysis will be undertaken at the project design phase for approval of the Adaptation Board. Adaptation options will be assessed for financial sustainability. Effectiveness will be assessed according to the extent to which the project a) is financial sustainable and b) reduces vulnerability to climate variability and change/generates adaptation benefits.

D. Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

A **National Environmental Action Plan (NEAP)**, prepared in 1988, led to an Environmental Investment Program (EIP1) that included a series of reforms and measures to strengthen environmental planning and assessment. This was followed by the *National Environmental Strategies for the Republic of Mauritius: National Environmental Action Plan for the Next Decade* (NEAP2, July 1999). The report highlights environmental stresses associated with economic growth, including several key issues: unplanned development of prime coastal areas, development of environmentally sensitive areas, beach erosion problems, poor lagoon water quality, loss of biological diversity in the sea and on coast, and deforestation and land degradation particularly in Rodrigues. The current NEAP emphasizes the need to “develop national policy that recognizes that the Coastal Zone will deteriorate unless concerted and unified action is taken to conserve it”. A second investment programme - EIP2 is currently underway which addresses this need.

The implementation of both NEAP I and II has resulted in new environmental measures, including the strengthening of the Ministry of Environment and the replacement of Environment Protection Act (EPA), No. 34 of 1991 with a strengthened EPA, No. 19 of 2002

(the most comprehensive piece of legislation in Mauritius dealing with the management and protection of the environment with the emphasis placed on the coordination of environmental affairs through an administration framework) as well as improved enforcement of the EPA through the creation of a *Police de l'Environnement*.

The Government Mauritius has prepared **National Environmental Strategies** (1999) and a **National Development Strategy** (2003) which establishes the commitment toward sustainable coastal land use and development. Key strategies to address the oceans and coastal management challenges are identified:

- Land-based pollution control and solid waste management;
- Promotion of sustainable tourism and ecotourism;
- Promotion of offshore fishing;
- Contingency planning for oil spill;
- Enhancement and establishment of Marine Protected Areas (MPAs)
- Mitigating of impacts of climate change;
- Mangrove and coral reef management and protection;
- Coastal erosion control and rehabilitation;
- Selective mariculture development
- Strengthening the management, monitoring, control and surveillance capacity;
- Control of motorized boats, particularly water scooters.

These strategies are in line with MDG7 (ensure environmental sustainability), which includes integrating the principles of sustainable development into country policies and programmes. The implementation of **Agenda 21, Barbados Plan of Action and other SIDS programmes**, as well as of MEAs to which Mauritius is a party have been under taken to the limits of our capacity. Mauritius is also a partner in the “Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern Africa Region”. The proposed project will enhance local capacities to contribute to this regional initiative.

Mauritius has also initiated an **Integrated Coastal Zone Management (ICZM) programme** which aims to address many of the concerns identified in the various national environmental and development strategies. This includes updated environmental assessment legislation and land use planning legislation to provide the necessary legal frameworks for sustainable development. It now needs support in implementing these frameworks. Updated Outline Schemes, Action Area Plans and Planning Guidelines are urgently needed to cope with the number of applications for coastal development and the anticipated effect of decline in the sugar sector and the release of large areas of land for potential resort and estate development.

The **Environmental Protection Act** (2002) provides the central means of environmental assessment and management. It establishes the regulatory process for Preliminary Environmental Assessment, Strategic Environmental Assessment, and Environmental Impact Assessment, and provides for Coastal and Maritime Zone Management. An Integrated Coastal Zone Management Committee is to oversee development of an integrated management plan, coordinate regional and international projects, monitor coastal water quality and resources and make recommendations about coastal constructions and management and protection of the coastal zone. The requirements for ‘strategic environmental assessments’ may be of special relevance for managing area-wide coastal development, yet the approach and capacity for such assessments is still evolving. The quality of EIAs that have been submitted are often considered poor, and there are also

technical limitations in government's ability to effectively review and guide the EIA process for development activities that have complex effects on the dynamic coastal environment.

The **Planning and Development Act (2004)** provides the legal framework for land use planning and regulation. The Act is part of the ongoing process of improving planning services, following a comprehensive review of the *National Development Strategy (2003)*. Key recommendations from this review included:

- A requirement for urgent institutional strengthening within the Government's central and local planning services;
- Updating of all Outline Schemes and assessing major development applications, which will involve an amendment to current legislation [completed];
- Streamlining of development permit procedures to allow major projects to be fast-tracked at central Government level;
- Constant monitoring and updating of Planning Policy Guidance to give clear and transparent Guidelines for development appraisal; and
- Creation of a high level Planning and Development Commission to advise the Government on land use issues and impacts.

While the legislative frameworks for environmental assessment and land use planning have been modernized, there are significant institutional and human resource capacity issues in the implementation of these frameworks.

The ***Maurice, Ile Durable (MID, programme for a Sustainable Mauritius – 2009 - 2012)*** is funded by the *Agence Française de Développement (AFD, French Development Agency)*, the GOM and UNDP, and aims to contribute to a sustainable Mauritius that can effectively combat global climate change, primarily focused on reducing ROM's dependence on fossil fuels. MID is a vision that emanates from the Prime Minister to create a sustainable future for Mauritius. Although it is still in its infancy, there are elements of MID that overlap with the AAP project. Specific objectives include strengthening ministerial capacity for programme implementation and initiating thematic changes, starting with the energy sector. MID will promote adaptation as a deliberative process to guide policy to ensure sustainable development, reduce vulnerability and minimise risk to humans from climate change.

The **National Climate Change Action Plan (1998)** is a comprehensive document detailing the science of climate change, socio-economic and political considerations in climate change planning, the first national inventory of sources and sinks of greenhouse gas emissions, vulnerabilities and risks to pivotal sectors in ROM as well as potential adaptation and mitigation methods. Measures were to include improving water resource management, education and data collection, monitoring programmes, an extensive awareness campaign targeting all facets of the population, computer modelling of the national and regional conditions, better provision of data for modelling, improving technical capacity, instituting a sustainable policy framework and providing institutional support. However, the follow-up of the proposed Action Plan was fragmented, and the NCC eventually became, to all intents and purposes, almost non-functional three years ago. This situation needs to be remedied, as the CCAP is a valuable and important plan.

The objective of the \$3M **Africa Adaptation Programme** is to assist ROM in adjusting its national development processes to incorporate climate change risks/opportunities. It will do this through five outcomes:

- Countries have introduced dynamic, long-term planning mechanisms to manage the inherent uncertainties of climate change

- Countries have built leadership capacities and developed institutional frameworks to manage climate change risks and opportunities in an integrated manner at the local and national levels
- Countries are implementing climate-resilient policies and measures in priority sectors
- Financing options to meet national adaptation costs have been expanded at the local, national, sub-regional and regional levels
- Knowledge on adjusting national development processes to fully incorporate climate change risks and opportunities is being generated and shared across all levels

Implementation started in November 2009.

Mauritius is beneficiary of a grant of €3 million through the **EU's Global Alliance for Climate Change**⁵, which has been set up to assist developing countries deal with issues of climate change. The specific support for Mauritius is currently being discussed with the Government and the financing modality will be agreed upon as a result.⁶

The **Indian Ocean Commission** has initiated a 3-year project in 2009 entitled 'Project to reinforce the capacity of members of the IOC to adapt to climate change'⁷, which has a funding grant of €3,645,000⁸. The main objective of this project is to establish regional cooperation between member states of the IOC (Comoros, Madagascar, La Réunion, Mauritius, and the Maldives) to better facilitate adaptation to climate change. In particular, the project will have four broad areas of intervention⁹:

1. Capacity building to study and to understand the regional impacts of climate change;
2. Identifying the vulnerabilities of participating countries;
3. Formulating a regional strategy on adaptation to climate change; and
4. Coordination of project.

The IOC project will develop regional climate change models that will provide more clarity on the multiple impacts of climate change in the Indian Ocean Region¹⁰. It is expected that preliminary results will be available in about one year's time, and the AF project could make use of these results for more accurate benefit-cost analysis of alternative adaptation measures; ii) the IOC project will place much emphasis on developing award and non-award courses on adaptation to climate change that will benefit the AF project.

⁵ For more details see http://www.epp-ed.eu/Activities/pdav08/day110_en.asp (accessed 3 June 2009).

⁶ Discussions with Mr Hubert Grandjean, Attaché, EU, Delegation of the European Commission to the Republic of Mauritius.

⁷ The exact title is 'Projet de Renforcement des Capacités des Pays de la COI dans le Domaine de l'Adaptation au Changement Climatique'.

⁸ The total cost of the project is distributed as follows: (1) FFEM - € 1 million; (2) IOC – € 1,935,000 (through the integrated Coastal Zone Management project funded under the 9th EDF); (3) Ministry of Foreign Affairs - € 495,000 (for technical assistance and scholarships); and (4) la Région Réunion - € 215,000.

⁹ Details of project provided by Mr Brice Montfraix, Regional Advisor Adaptation to Climate Change, IOC.

¹⁰ The Fourth Assessment Report of the IPCC did not carry out detailed climate change scenario analysis for the Indian Ocean Region.

UNFCCC Second National Communications

ROM is currently preparing its Second National Communication (SNC) under the UNFCCC, The proposed AF project will collaborate with the 2NC team, expanding climate risk assessment work undertaken.

The **UNDP Country Programme** (2009-2011) is currently being prepared. The Country Programme will be anchored in the ten year national economic reform programme with a focus on capacity development in four strategic national initiatives: (a) the Empowerment Programme (EP), (b) the “Zone d’ Education Prioritaire (ZEP), (c) Programme-Based Budgeting (PBB) and sector strategies and (d) environment protection, energy and management of natural resources. These focus areas are in line with UNDP’s Strategic Plan 2008-2011 as it promotes inclusive growth, gender equality and MDG achievement and environment and sustainable development. Support to PBB links poverty reduction to governance efforts. The focus on inclusive growth, public finance reforms and inclusive education reforms is also in line with UNDP Africa’s Capacity Development for Pro-Poor Growth and Accountability Strategy. In implementing the Country Programme, UNDP will seek to develop national capacities through policy advice, advocacy and technical support to implementation. The programme will be guided by principles of national ownership, multi-stakeholder partnerships and synergies among the four components to ensure sustainability and scale up impact. Regional and South-South cooperation will be essential in the exchange of knowledge and good practice.

Mauritius ratified the Kyoto Protocol in May 2001.

E. Describe how the project / programme meets relevant national technical standards, where applicable.

All interventions will be built to national technical standards. These will be elaborated in the project document phase for approval of the Adaptation Board.

The project will be consistent with all national social and environmental safeguards and standards. As a UNDP supported project, all project activities will in keeping with national and UN standards.

F. Describe if there is duplication of project / programme with other funding sources, if any.

Duplication will be avoided. Complementarity and collaboration will be sought with interventions and projects in the pilot areas. This will be fully scoped during the project development phase for approval of the Adaptation Board.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

- i. The project will participate, as relevant and appropriate, in UNDP sponsored networks, organized for senior personnel working on projects that share common characteristics. The **Adaptation Learning Mechanism (ALM)** and **wikiADAPT** will function as key electronic platforms to capture project learning and adaptation impacts generated by the project. The ALM lessons learned template (to be made available by RTA) will be adapted for use by the project. To support this

goal, adaptation-related activities from the project will contribute knowledge to the ALM, such as the following:

- Assessing the costs and benefits of adaptation
 - Value of ecosystem services and eco-system based adaptation options for adaptation;
 - Best practices in integrating adaptation into national and local development policy, and project design and implementation mechanisms.
 - Lessons learned on removing the most common barriers to adaptation, with special attention to the roles of local partners, international partners, UNDP, and GEF in designing and implementing projects
 - The conditions for success (or failure), including replication and scaling up
 - Exploring the catalytic role of public policy (fiscal and regulatory) and financing.
- .ii. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned.
- iii. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identification and analysis of lessons learned is an ongoing process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP 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.

Annual Review Report will be prepared by the Programme Manager. As minimum requirement, the Annual Review Report shall consist of the Quarterly Progress Report (QPR) covering the whole year with updated information for each above element of the QPR as well as a summary of results achieved against pre-defined annual targets at the output level.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation.

All the major stakeholders were consulted by UNDP Country Office. Consultations were also held during the NCSA process and the National Dialogue Initiative

A stakeholder participation plan will be developed for the project development phase.

Project implementation will take place using a participation planning of affected communities. The project document will provide details about the approach to be taken.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The project will focus on adaptation measures and solutions that address climate change risks. The underlying baseline situation is as follows:

Outcome (1): Climate change risks integrated into national coastal development strategies and plans

Despite a general awareness of climate change within government bodies, currently climate change is barely considered in national development policies or plans, and there is no national adaptation plan. The Ministry of Environment has requested that the Ministry of Tourism prepare a strategic environmental assessment (SEA) for the coastal zone, on which the expansion of tourism will be based.

Without external assistance it is unlikely that this will address the potential risks and impacts of climate change, resulting in unsustainable and maladaptive development. The capacity of Mauritius (including Rodrigues) to implement ICZM systems capable of addressing climate change risks is limited by a number of factors: (a) Legal frameworks for environmental protection and management are weak, and compliance is poor, due to limited power to enforce regulations and monitor compliance

Outcome (2): Institutional and individual capacities to implement integrated coastal zone management in response to climate change impacts strengthened

The recent UNDP-GEF Capacity Needs Assessment highlighted a multitude of capacity weaknesses that inhibit adaptation to climate change in RoM. These barriers to adaptation, which include: (a) insufficient information, (b) limited technical capacity to respond to the problems, and (c) weaknesses in institutional coordination and mechanisms for comprehensive environmental planning. Institutional coordination is particularly important for land management in the coastal zone.

Outcome 3: Innovative pilots for adaptation measures implemented

A number of baseline measures are being pursued by the government, private sector and NGOs to enhance environmental sustainability in the coastal zone, including coral and mangrove rehabilitation, increased setback from the shoreline, beach and dune management, the banning of sand removal, reduction of anthropogenic stresses on the lagoon and its constituent reef systems, a moratorium on the enlargement of reef passes or the creation of new passes, and the deployment of gabions on beaches to prevent erosion. However, these measures represent general vulnerability-reduction measures rather than specific climate change adaptation measures, and do not go far enough to address “additional” climate change risks. Across the private and public sectors there is a willingness to implement adaptive measures, but uncertainty as to what should be done, meaning that adaptive innovations will be limited in scope, piecemeal in nature, and insufficient to secure sustainability in the medium to long term.

Baseline investments that the Government is making are as follows:

- Ministries and national scientific agencies will provide support in the form of personnel, offices and equipment for activities under Outcome (1) and elements of Outcome (2). In particular, the Meteorological Service and Oceanographic Institute will provide resources, personnel and technical assistance for the development of the scientific materials for inclusion in the SEA and NAS.
- Existing and planned government expenditure on ICZM activities, including monitoring, mapping, and activities aimed at reducing stresses on the lagoon area. These activities are currently implemented by national scientific bodies, NGOs, and international organisations including the Indian Ocean Commission, which has a budget of €18 million to engage in ICZM activities in the Indian Ocean and East African region.
- Awareness raising activities will take advantage of existing programmes run by local NGOs and the Ministry of Environment & NDU, whose ongoing programmes will contribute co-financing for these activities.
- Investments from the private sector totally over \$2.5 billion will be required to meet the target of 2 million tourists by 2015. An additional 16,500 hotel rooms will be required, 4300 of which are currently at the planning or construction phase. Additional investment will develop supporting infrastructure for tourism expansion.

The AF project will build on and collaborate with these initiatives and investments to ensure that a climate risk management approach is taken.

Cost estimates will be provided in the final project document submitted for approval by the AF Board. Initial cost estimates have been developed. These are as follows:

- (i) 2 feasibility studies and commissioning of 2 Impact Assessment studies: 470,000 USD
- (ii) Development of stakeholder participatory plan: 30,000 USD
- (iii) Design, tendering, construction and supervision of wave breaker at Riviere des Galets¹¹: 4,000,000 USD
- (iv) Design, tendering, construction and supervision of coastal rehabilitation work at Mon Choisy¹²: 2,000,000 USD

¹¹ Partial coastal rehabilitation works to the tune of 1.5 Million USD have already been carried out over the past 5 years at Riviere des Galets by the Ministry of Environment & NDU. This site is being subject to further impacts of storm surges and inundation. This site is one of the national priority site for adaptation, following the recommendation of the Study of Coastal Erosion in Mauritius (2003) and an inter-ministerial technical committee on 11 June 2007. As a long term measure to protect the inhabitants of Riviere des Galets from impacts of storm surges, the implementation of an artificial reef / wave breaker system as a first line of defense against storm surges and high energy wave regimes have been recommended.

¹² Reef and beach restoration works have been recommended by an inter-ministerial technical committee, in line with the recommendations made by the Study of Coastal Erosion in Mauritius (2003).

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

Implementation arrangements will be determined during the project formulation process that is expected to commence as soon as the concept is approved. Details will be outlined in the project document submitted for AF approval. It is envisaged that the Executing agency will be the Ministry of Environment & National Development Unit (NDU). The project will be implemented following a NEX arrangement and will be implemented over five years. The plan for Implementing partners will be scoped out during project development phase. Coordination will be by the Department of Environment.

B. Describe the measures for financial and project / programme risk management.

Programme risks will be scoped and mitigation measures will be devised during project development phase for approval of the Adaptation Board.

C. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

Project monitoring and evaluation (M&E) will be in accordance with established UNDP procedures and will be carried out by the Project team and the UNDP Country Office. The Results Framework will define execution indicators for project implementation as well as the respective means of verification. A Monitoring and Evaluation system for the project will be established based on these indicators and means of verification. It is important to note that the Results Framework, together with the impact indicators and means of verification, will be fine-tuned during project formulation.

TABLE 1. Indicative Monitoring and Evaluation Work plan and corresponding Budget.

Type of M&E activity	Responsible Parties	Budget US\$ Excluding project team staff time	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO, UNDP GEF 	Indicative cost: 10,000	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> ▪ UNDP RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on output and implementation	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project manager and team 	None	Quarterly
Mid-term Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 40,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost : 40,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ local consultant 	0	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project manager and team 	Indicative cost per year: 3,000	Yearly
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government 		Yearly

	representatives		
TOTAL indicative COST		US\$ 187,000	
Excluding project team staff time and UNDP staff and travel expenses		(+/- 5% of total budget)	

Once the project starts implementation, a Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Annual Workplan (AWP), with a detailed M&E Strategy, will be agreed at the Inception Workshop. The Inception workshop Report should be prepared no more than 1 month after project start-up.

Progress will be monitored as follows:

Quarterly progress made shall be monitored in the UNDP Enhanced Results Based Management Platform. Based on the initial risk analysis submitted, the risk log shall be regularly updated.

Annual Review/Project Implementation Reports (APR/PIR) will be prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July).

Periodic Monitoring through site visits: UNDP CO and Regional Coordinating Unit will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP Regional Coordinating Unit and will be circulated no less than one month after the visit to the project team and Project Board members.

The project will undergo an independent **Mid-Term Evaluation** at the mid-point of project implementation. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the [UNDP Evaluation Office Evaluation Resource Center \(ERC\)](#).

The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

An independent **Final Evaluation** will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The Final Evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The Final Evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of adaptation benefits. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit. The Final Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the [UNDP Evaluation Office Evaluation Resource Center \(ERC\)](#).

D. Include a results framework for the project proposal, including milestones, targets

and indicators.

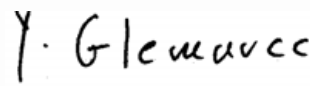
This will developed during the project development phase for approval of the Adaptation Board.

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT¹ *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

Mr P. Yip Wang wing, Ag Financial Secretary Ministry of Finance & Economic Empowerment	Date: 26 April 2010
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B. B. IMPLEMENTING ENTITY CERTIFICATION *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, understands that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
 Yannick Glemarec Director Environmental Finance Implementing Entity Coordinator	
Date: April 23 2010	Tel. and email: +1 – 212 906-6843 yannick.glemarec@undp.org
Project Contact Person: Jessica Troni	
Tel. And Email: + 27 12 354 8056 jessica.troni@undp.org	

¹. Each Party shall designate and communicate to the Secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

INSTRUCTIONS FOR PREPARING A REQUEST FOR PROJECT OR PROGRAMME FUNDING FROM THE ADAPTATION FUND

Project and programme applications must be clear on the problem to be addressed, the objective(s), what the project/programme will deliver when, how and by whom. Clear baselines, milestones, targets and indicators should be included to ensure progress and results can be measured. Programmes will generally be more complex and will require greater oversight and management which should be properly explained under Implementation Arrangements for programmes.

DATE OF RECEIPT. Please leave this space on the top right of the page blank. The Adaptation Fund Board Secretariat will fill in the date on which the proposal is received at the Secretariat.

ADAPTATION FUND PROJECT ID. Please leave this space on the top right of the page blank. The Adaptation Fund Board Secretariat will assign a number to your project internally.

PART I: PROJECT / PROGRAMME INFORMATION

CATEGORY: Please specify which type of project you are proposing. The two options are:

- A) SMALL-SIZED PROJECT/PROGRAMME.** Proposals requesting grants up to \$1 million.
- B) REGULAR PROJECT/PROGRAMME.** Proposals requesting grants of more than \$1 million.

A programme will generally fulfil the following criteria: A series of projects which could include small-size projects or regular projects aimed at achieving an outcome that is otherwise not achievable by a single project. Projects under a programme would have synergies in their objectives and implementation. A programme may also cover more than one sector and cross borders. Programmes usually engage multiple partners / stakeholders.

COUNTRY/IES: Please insert the name of the country requesting the grant. Please note that regional projects / programmes should mention all the participating countries.

TITLE OF PROJECT / PROGRAMME: Please enter the title of the proposed project / programme.

TYPE OF REQUESTING ENTITY: Please specify which type of Implementing Entity the project will be managed by. The two options are:

- A) NATIONAL IMPLEMENTING ENTITY**
- B) MULTILATERAL IMPLEMENTING ENTITY**

NAME OF IMPLEMENTING ENTITY: Please specify the name of the Implementing Entity

EXECUTING ENTITY(IES). Please specify the name of the organisation(s) that will execute(s) the project funded by the Adaptation Fund under the oversight of the Implementing Entity.

AMOUNT OF FINANCING REQUESTED. Please fill the grant amount (in US Dollars equivalent) requested from the Adaptation Fund for this proposal.

PROJECT / PROGRAMME BACKGROUND AND CONTEXT. Provide brief information on the problem the proposed project is aiming to solve. Outline the economic, environmental and social development context in which the project would operate. For the case of a programme, the analysis will be more complex, focusing on how climate change is expected to affect multiple stakeholders, sectoral and/or economic activities within a well defined region.

PROJECT / PROGRAMME OBJECTIVES. List the main objectives of the project. For the case of a programme, this is likely to involve multiple objectives by stakeholder / sector / region, based on an overall strategic plan at the regional, national or local level.

PROJECT / PROGRAMMES COMPONENTS AND FINANCING. Please fill out the table presenting the relationships among project components, activities, expected concrete outputs, and their corresponding budgets to accomplish them. For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well defined interventions / projects.

The aforementioned terms are defined below to facilitate the process of completing the table:

PROJECT / PROGRAMME COMPONENTS. The division of the project/programme into its major parts; an aggregation of set of activities

ACTIVITIES. Actions taken or work performed through which inputs, such as funds, technical assistance and other types of resources are mobilized to produce specific outputs. For the case of programmes, list the likely types and number of projects that the programme will support

MILESTONES / TARGETS. Milestones help with regular monitoring of progress towards the target. Targets indicate the desired result at the end of the project.

INDICATORS -- What is going to be measured?

EXPECTED CONCRETE OUTPUTS. The product, capital goods and services which result from a development intervention relevant to the achievement of outcomes.

EXPECTED OUTCOMES. The change in conditions, or intended effects of an intervention, usually brought about by the collective efforts of partners. Outcomes are achieved in the short to medium term.

AMOUNT (\$). Indicate grant amounts in US dollars by project/programme components.

PROJECT / PROGRAMME EXECUTION COST. The main items supported by the Adaptation Fund for project management including consultant services, travel and office facilities, etc.

TOTAL PROJECT / PROGRAMME COST. This is the sum of all project/programme components requesting Adaptation Fund Board approval.

IMPLEMENTING ENTITY PROJECT CYCLE MANAGEMENT FEE. This is the fee that is requested by an Implementing Entity for project cycle management services.

AMOUNT OF FINANCING REQUESTED. This amount includes the total project cost plus the project cycle management fee.

PROJECTED CALENDAR. Please indicate the dates of the following milestones for the proposed project.

START OF PROJECT / PROGRAMME IMPLEMENTATION The date on which project becomes effective and disbursement can be requested. This is also the trigger date for the Adaptation Fund Trustee to allow the Implementing Entities to request for disbursement

MID-TERM REVIEW. The date on which the Implementing Entity completes its mid-term review of the project.

PROJECT / PROGRAMME CLOSING. Project closing is set as six months after Project Completion. This is the date on which Implementing Entity completes disbursement from the grant and may cancel any undisbursed balance in the grant account.

TERMINAL EVALUATION. The date on which the Implementing Entity completes the terminal evaluation report, normally two months after project completion but in any case, no later than twelve months after project completion.

PART II: PROJECT / PROGRAMME JUSTIFICATION

- A.** Describe the project / programme components, including details of activities in each component, regarding how the components will meet project objectives. Describe how the activities will help with adaptation to climate change and improve climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience
- B.** Describe how the outputs and outcomes of the project / programme will provide economic, social and environmental benefits, particularly to the most vulnerable communities in the targeted area.
- C.** How is the project / programme cost-effective. Compare to other possible interventions that could have been taken to achieve similar project objectives.
- D.** Describe how the project / programme is located in the framework of national development strategies, plans, action plans, etc.

- E. Describe how the project / programme design meets national technical standards.
- F. Describe if the project / programme overlaps or duplicates similar activities from other funding sources.
- G. Describe the activities included in the project / programme to gather lessons learned from project design and implementation and for their dissemination.
- H. Describe the consultative process undertaken during project design. List the stakeholders consulted and the methods of consultation.
- I. Provide the full cost of adaptation reasoning for the funding requested for the project / programme.

PART III: IMPLEMENTATION ARRANGEMENTS. Describe the various elements of project implementation as enumerated below:

- A. Adequacy of project / programme management arrangements. For the case of a programme, explain how the programme strategy will be managed and evaluated, and how individual projects will be identified, designed, appraised, approved, implemented and evaluated against programme's strategic objectives. Provide a full organogramme of the executing agents and how they report to each other.
- B. Measures for financial and project / programme risk management. For the case of a programme, provide detailed information to illustrate how risk will be managed.
- C. Monitoring and evaluation arrangements including budgeted M&E plan.
- D. Procurement arrangements including standards and safeguards.
- E. Results framework. Guidance and a template for a Results Framework will be provided.

PART IV: ENDORSEMENT BY THE DESIGNATED GOVERNMENT AUTHORITY FOR ADAPTATION FUND AND CERTIFICATION BY THE IMPLEMENTING ENTITY

9. RECORD OF ENDORSEMENT BY DESIGNATED GOVERNMENT AUTHORITY. Provide the name, position, and government office of the designated government authority and indicate date of endorsement. If this is a regional project, list the designated government authorities of all participating countries endorsing the project. The endorsement letter(s) should be attached as an annex to the project proposal.

10. IMPLEMENTING ENTITY CERTIFICATION. Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project contact person's name, telephone number and email address.

ⁱ Mauritius Meteorological Services: Climate change impacts on Mauritius. 2008.

ⁱⁱ Mauritius Meteorological Services: Climate change impacts on Mauritius. 2008.

ⁱⁱⁱ G. Gastineau, and B. J. Soden, 2009. Model projected changes of extreme wind events in response to global warming, *Geophys. Res. Lett.* **36**, L10810, doi:10.1029/2009GL037500.

^{iv} Mauritius Meteorological Services: Climate change impacts on Mauritius. 2008.

^v Mauritius Meteorological Services: Climate change impacts on Mauritius. 2008.

^{vi} Lal, M., Harasawa, H., Takahashi, K. 2002. Future climate change and its impacts over Small Island Developing States. *Climate Research*. **19**: 179 – 192.

^{vii} Gilman, E. 2004. Assessing and managing coastal ecosystem response to projected relative SLR and climate change. Prepared for the Research Foundation for Development Forum on Small Island Developing States: Challenges, Prospects and International Cooperation for Sustainable Development. Contribution to Barbados + 10 United Nations International Meetings on Sustainable Development of Small Island Developing States, Port Louis.

^{viii} Republic of Mauritius: Climate Change Action Plan. 1998. Prepared with the assistance of the United States Country Studies Programme for Climate Change.