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Mid-Term Evaluation Report

Climate Change Adaptation Programme in the Coastal Zone of Mauritius

GOM/UNDP/AFB Project: 00080227
UNDP PIMS # (4453)

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ACRONYMS AND ABBREVIATIONS

APR	Annual Project Review
AFB	Adaptation Fund Board
AWP	Annual Work Plan
BD	Biodiversity
CB	Capacity Building
CD	Capacity Development
CBA	Cost Benefit Analysis
CBO	Community Based Organization
CC	Climate Change
CCA	Climate Change Adaptation
CP	Country Program
CPAP	Country Program Action Plan
CTA	Chief Technical Advisor
CZA	Coastal Zone Adaptation
CCACZ	Climate Change Adaptation in Coastal Zone
EWS	Early Warning System
GEF	Global Environment Facility
HR	Human Resources
KM	Knowledge Management
NRM	Natural Resources Management
MDGs	Millennium Development Goals
MET	Mauritius Meteorological Services
M&E	Monitoring and Evaluation
MOE	Ministry of Environment and Sustainable Development
MOI	Mauritius Oceanography Institute
MTR	Mid-Term Review
MTE	Mid-Term Evaluation
NDRRMC	National Disaster Risk Reduction and Management Centre
NGO	Non-governmental Organization
NPD	National Project Director
NPM	National Project Manager
NPMC	National Project Management Committee
PB	Project Board
RT	Results tracker
PCU	Project Coordination Unit
PPR	Project Progress Report
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change

Opening page

Project Summary Table:

Project Title	Climate Change Adaptation Programme in the Coastal Zone of Mauritius
AFB Project ID:	00062857
UNDP Project ID:	00080227
Country:	Mauritius
Total Project Budget	USD 9,119,240
Implementing agency	UNDP
Implementing partner	Ministry of Environment and Sustainable Development
Project Start Date	August 2012
MTE Date	October–December 2014
New Project End (MTE)	Extension granted to December 2018

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1. EXECUTIVE SUMMARY

Brief Description of Project

The Republic of Mauritius (ROM) is a group of islands in the southwest of the Indian Ocean, consisting of the main island of Mauritius, Rodrigues, and several outer islands located at distances greater than 350 km from the main island. As a Small Island Developing State (SIDS), the ROM is particularly vulnerable to the adverse effects of climate change, especially in the coastal zone, where a convergence of accelerating sea level rise and increasing frequency and intensity of tropical cyclones (with more intense rainfall events and stronger winds) will result in considerable economic loss, humanitarian stresses, and environmental degradation.

The visible and measurable effects of climate change in the coastal zone of ROM have become more apparent over the last ten years. There is a direct linkage between climate change effects on coastal ecosystem services (especially coral reefs and lagoons) and the integrity of the whole coastal zone of ROM. As coral reefs lose the race with sea level rise, it is imperative that the critical ecosystem function of wave attenuation be replaced in some manner. Adaptation therefore requires *in situ* changes in behavior and site management, and appropriate technical interventions as well as early warning systems that provide enough time for communities to move away from areas where the risk of storm surge and flooding is imminent. In addition, strategic catalytic interventions are needed for transformative change, including a focus on planning and education. Storm surges and swell waves are expected to be aggravated by sea level rise and climate change effects on weather patterns. This will compound underlying trends of increasing coastal erosion and pressure on scarce land resources and increase physical vulnerability of island populations, infrastructure, and livelihood assets. This project will provide a demonstration of coastal zone adaptation.

Context and purpose of the evaluation

MTE is a requirement of the AFB. In line with UNDP/AFB Policy, UNDP/AFB-funded projects are monitored and evaluated regularly. The Mid-Term Evaluation is to determine progress toward the achievement of outcomes and to identify course correction, if needed. Its focus is on the effectiveness, efficiency, and timeliness of program implementation and on highlighting issues requiring decisions and actions. It is to present initial lessons learned about program design, implementation, and management. Mid-Term evaluation findings are incorporated as recommendations for enhanced implementation during the final half of the program's term. This MTE is early with regard to implementation due to slow but high quality and diligent national procurements, delaying work on the two key outcomes 1 and 2 (1 and 2 include the significant investments up to 94 % of budget) from September 2012 until October 2014. Because the MTE is early in the project's progress, MTE results are considered from the perspective of design, strategy for projected outcomes one and two, and of enabling environment for results and sustainability, which includes policy, development and learning (advocacy), and knowledge management to realize the longer-term capacity change results on CCA and EWS. In terms of work, many activities have been completed and these are showing observable learning (discussion with beneficiaries).

Main conclusions, recommendations, and lessons learned

Relevance

This project is highly relevant to Mauritius and is given a ***satisfactory rating at MTE*** based on its coherent design and the country context. The visible and measurable effects of climate change in the coastal zone of ROM are apparent, reflecting *increases in the rate of negative changes* in the coastal zone due to climate change, and an *increase in the number of vulnerable sites*. The Mauritius Meteorological Services data confirmed that the rate of sea level rise (measured in Port Louis) has averaged 3.8 mm/year in recent years; comparing to an average of 2.1 mm/year over the last 22 years. The net measured sea level reflects a compounded effect of real sea level rise (absolute water volume increase and more low pressure systems) and a higher frequency and height of waves, i.e. water piled up at that location–both of which have real implications for ***coastal areas (surge flooding and erosion***). MTE learned that several extreme weather-related events have manifested in lives lost and property damage. The head of the disaster risk reduction centre said 11 weather events required collective emergency action in the past year alone. Most relevant to this project, on May 12, 2007, an extra-tropical cyclone south of the island of Mauritius created 10 meter offshore swells within a period of 18 seconds, traveling 50 km/hr, and hitting the south coast as 5-6 meter swells on top of a high tide, resulting in extensive flooding and erosion.[i] In March 2014, extreme rain in a very short time along with factors concerning maintenance of the town's flood infrastructure created a disaster in Port Louis, and the flash flooding killed 11 people.

Meetings and interviews with key officials across the multi-stakeholder group vested in climate change adaptation on coastal zone, including government and non-governmental departments and sectors, show that stakeholders recognize the countries vulnerability in terms of safety and security and inclusive growth. Interviewees are eager for results and happy to see ***concrete*** actions in three sites and on Rodrigues in particular, in the context of its broader strategy on climate change and disaster risk reduction. This project is part of a broader strategy on climate change adaptation on the coastal zone (climate change cell (ICZM at MOESD and NDRRMC are other key actors in CC implementation activity) and the government is working on CCACZ within its existing coastal engineering adaptation issues. Mauritius is receiving technical support, especially on cost effective coastal zone innovations, from Japan and other governments. The team observed the result of the Japanese collaboration at nearby Quatre Soeurs project sites. The projects flagship work on CBA is expected to inform the country's national strategy on climate change adaptation and DRR by undertaking scientifically sound analysis and root causes analysis of the beach degradation and overall vulnerability (interviews with head of climate change cell and head of the national disaster response agency). Cost benefit analysis is an important tool and requires transfer of capacity intended to support government scale-up coastal zone protection and adaptation. The approach is of value, and the demonstration in three different site-specific problems is intended to support a whole country climate-proofing exercise on vulnerable sites. It will help the government decide on options for action at all vulnerable sites and support of future management actions.

Effectiveness Rating - Satisfactory

As a catalytic fund intended to be furthered by government investment with low recorded delivery rate reported at MTE (6%), this is a risk. The low delivery is due to national procurement laws and procedures for large projects. Team felt that although the delivery has been low, it is not indicative of the results to date as much has been achieved. The enabling environment for results and sustainability has been a main consideration, including scrutiny of capacity building training and approach, development of partnership protocols, and strengthening of governance and implementation mechanisms, i.e. the functioning of the technical and steering and village level engagements. MTE reviewed the project progress to date and focused mainly on stakeholder involvement and performance in planning implementation strategies, engagement in project mechanisms for cross-sectoral collaboration, enticing strategies for community-level engagement in planning, monitoring, and maintaining a new infrastructure and site level cross-sectoral extension work, learning a new approach for climate proofing infrastructure, and disaster risk reduction (i.e. the development of a reliable and practical storm surge early warning system). The MTE considered project planning and the likelihood of the potential for future scale-up of the CBA approach implemented at sites. This is an example of how government and partners can undertake cost benefits analysis using future in-country teams in a community-based planning approach. In fact, the project has made excellent progress on all these, and in particular on planning for and implementing two major procurement exercises, one USD$817,000, (CBA and works) and the other, USD$350,000 (flood early warning system). Both are under implementation at MTE.

The procurement for outcome one was finalized after two years of strategy development, TOR design, and procurement exercises. The feasibility report for options at three sites is planned to be available by March 2015, after which work on infrastructure, ecological, and social works will begin. For outcome two, the other technically substantive component of this program, a budget rescheduling exercise is completed, and the bidding and procurement has been finalized for the design of a basic but practical early warning system for storm surge. The plan is to develop software and 3 models (for mainland Mauritius, Rodrigues and Agalega) tailored to the context and to support the Mauritius Meteorological Services run the models and issue reliable forecasts. The purchase of software for Mauritius and procurement of a wave rider buoy is being explored (subject to availability of funds). The country already has two wave riders. This work will be completed in partnership with the MET service and MOI. The development of the early warning system for storm surge is an instrumental and concrete means for implementing a protection strategy for the coastal zone in line with the NDS. The system will be in place by August 2015 and is open to be extended over time and-built upon to include wave swell with a much greater involvement of government through co-financing expected in time.

Capacity Building Approach

The project's learning outcomes and approach might be better centered on setting up or contributing to a new institutional framework for CCACZ, instilling a cost benefits approach CBA, and systemic learning objectives in relation to climate risk reduction, coastal zone management (and financing for CZM), and knowledge of climate proofing infrastructure and local resource users knowledge on the effect of CC. This is related to the institution of a new approach to coastal zone public works at site level (and Rodrigues) and for preparing communities to adapt and withstand future climate shocks. The capacity building strategy is, however, currently focused on training and upgrading skills, but this can easily be shifted to a greater and long term focus on strengthening the capacity of public policy personnel, coastal zone resource user groups, NGOs/CBOs, and government extension workers at site level through a knowledge network and learning by doing approach. The capacity building CB approach can be best facilitated by viewing the project management unit as a cross-sectoral learning platform that facilities learning and

instills cross sectoral mechanisms for planning and for taking joint actions. Instilling a national platform for learning will help to better plan and make informed decisions. The work on capacity building includes strategies at the local level for co-management of resources and management of community level assets and for informing the implementation of future infrastructure and construction of ecological and economic works. The team should develop a clear capacity strengthening strategy linked to its KM and M&E strategy with a focus on the learning by doing and co management approach. This will target key CCACZ learning. In term of planning at site level, the need is to link to local level planning, including the ongoing vulnerability district planning exercise within the broader MOESD climate change division strategy (recommendation #). MTE found this to be the case with the project approach to CCACZ in Rodrigues.

Lengthy Procurement Exercise

There is an urgent need for an agreement on fast tracking procurement. MTE disclosed a serious risk with the process for procurement. In all sites shortly there will be a lot of implementation of works, including proposal by the Commission for adaptation work at Mon Choisy and Rivière des Galets, a Refuge Centre at Quatre Soeurs, purchase of equipment for Environment in Rodrigues for the construction of the EWS and a resource centre. The project implementation team should not deal with further delays in terms of procurement (barrier for implementation). Otherwise, risk of an unsatisfactory result which will compromise project results and hamper future access to adaptation funds. The people of Mauritius are dependent on a scientifically sound investment strategy for scaling up adaptation on the coastal zone for their projection and security and for security of the investments in coastal zone tourism for sustainable development and green jobs. The suggestion is to consider the project as an emergency project and to have key officials agree to fast track the pilot exercise in the name of national security and as a fiscal risk.

Monitoring and Evaluation CCA on Coastal Zone Adaptation Indicators

The AFB project modality is new, and the log frame **cannot be changed** (interview with AFB colleagues and UNDP AFB RTA and program officer). This is a constraint and a lesson for future adaptation fund projects. Adaptive management and smart indicators are important to guide local teams and strategies to comprehensive transformative changes required (*See suggested smarter monitoring indictors developed in partnership with PT-Annex*). This project modality can benefit from the adaptive management approach. Log frame should form the base as a rolling management tool. The MTE helped the team think through smarter indicators around the climate resilience outcome; this can be used to guide strategies to end results. Future reporting can remain through the project document log frame, found by MTE as not doing justice to the richness of the contextual change needs, but the future implementation can be guided by smarter indicators developed at MTE). MTE believes an M&E officer should be appointed to provide more attention to M&E for results and develop a local M&E plan for each site including Rodrigues.

Active, Scientifically, and Economically Informed Steering Committee and Technical Committees

The steering committee (Project Board) is a significant forum for policy learning and for decision making. It is being prepared and briefed by the project management unit; nevertheless, MTE observed that it needs more active and involved participation of key government actors with a stake in climate change adaptation on the coastal zone. All relevant government agencies are duly represented at the steering and technical committees, including the climate change division, Ministry of Finance, Ministry of Housing and land, NDRRMC. The constitution of the committees were agreed and approved at the inception phase of the project. Higher level of engagement will enable optimal

policy learning and ownership of the results of this project for scale-up. The MTE does, however, urge the director of the climate change division, the finance department, the land use planning division, and the disaster risk management centre to become more actively engaged as a matter of priority. It is through the coordination, debate, and learning imparted through the technical committee that high level decision makers can understand the full cost and benefit implications of future implementation to protect and augment the coastal zone to grow its potential and to save lives and reduce disaster risk. *In addition, for capacity development, the technical committee members can continue to be engaged in site- level implementation, noting that the longer term activities for site monitoring for government departments is to be designed while consultants are undertaking the CBA.*

Knowledge Management Strategy

The project management unit's strategy for coordination and learning is for project to be a platform for knowledge dissemination and learning. However, MTE finds there needs to be significant attention to robust and constructive knowledge management strategy to do this effectively. Currently, these activities focussed on product development and dissemination and support is urgently needed for more strategic elements by developing a KM and CCACZ dynamic learning system (linked to RBM and CB objectives) and leveraging project products, methodologies and tools to influence policy, capacity building and to generate. This will also enable dialogues at all levels (including in communities) about cost benefits for ongoing, support monitoring and learning that will influence implementation of the pilot strategies and the future scale up work. This area needs urgent technical support to help the project team develop a high profile and functioning KM system for future implementation.

Community Level CCA Co-Management and Engagement for Costal Zone Adaptation (CZA)
The project needs a strong (written) community engagement strategy that considers the sustainability and scale-up plan in-house. Currently, work is found ongoing with communities (it may be too early in implementation to make a concrete judgment call on effectiveness), that is helping to empower communities in the decision-making processes concerning coastal zone adaptation. A formal MOA has been signed by the community in Grand Sable and Quatre Soeurs (two highly vulnerable sites in Mauritius) to implement ecosystem based adaptation at local level.

The climate change division is currently experimenting with a methodology for vulnerability mapping and planning with the district councils and municipalities for planning highly vulnerable sites and community engagement in site assessments and because it is already slated as key activity in output 5.5, synergies might be forged in these activities to demonstrate the importance of a co management approach in the coastal zone of Mauritius. The work the project team begun on Rodrigues is very good in this regard (Also see analysis of Rodrigues -Annex).

Rodrigues – Transformative Adaptation Strategy - Planning (see full analysis of Rodrigues situation in Annex 2)
The MTE participated in a joint Rodrigues and project planning meeting (November 17-18, 2014) whereby the AFB funding for coastal adaptation works, early warning system, policy review, and capacity building was discussed. By the end of these meetings with all key stakeholders (see annex list of meetings), a plan was agreed upon with the local environmental department to focus on a Marine Resources CCA and Development centre. The centre must be developed with planning support and excellence in design and architecture to really spur the changes needed. The shoddy building has already been designated by government for this exercise as co-financing. It can be developed in line with the longer term vision towards project goals based on the discussion had during MTE between government and project

management. The new project-related collaboration was formalized in a MOU in December 2014. While visiting the small island, the MTE witnessed and learned about inter-connected coastal zone management issues. The scale of the natural resource management and environmental degradation issues will benefit from a holistic and strategic intervention for coastal zone adaptation. The project strategy for Rodrigues is thus viewed as *the right approach,* but success is contingent on national and provincial buy in for a vision in line with a longer term island development and environmental management plan. A catalytic intervention will lead to quality planning and a transformative approach catering to the urgent need for systemic capacity building, environmental monitoring, and enforcement and planning needs.

Efficiency Rating - Marginally Satisfactory

Efficiency has to do with cost effectiveness. If this project succeeds to put in place an early warning system for storm surge on coastal zone, demonstrates concretely the results of an approach for scientifically based cost benefits analysis for adaptation, imparts broad undertaking of the root causes of coastal zone erosion to the society at large, and especially builds capacity within the country to do CBA influence engineering exercises with government, provides sector and community involvement in the management and ongoing monitoring of coastal zone science and development activity, then it will have been cost effective. If the project fails to deliver the outputs and strategize effectively in a timely fashion, it risks success. Risking success in this exercise is a high cost to government as it will fail to demonstrate that it can deliver on donor funding and a high priority investment for the government, so facilitating a solution for slow procurement is critical in this project.

Sustainability Rating -Medium Likely

For a catalytic pilot project with seed funding, the sustainability is dependent on success in imparting capacity and implementing a strategy that instills an ongoing in-country monitoring system, cross sectoral collaboration, and successful demonstration. The technical steering committee needs to be actively engaged concerning the approach for making options and learning the approach. More work can be done to facilitate policy learning and for the policy makers to address the urgency and the cost of the investment to be determined. A handbook on cost benefits is planned, and this will help decision makers understand the future investments in framing this project. It needs a good communication strategy to ensure that the work is understood and the costs are clearly articulated to the public and the policy makers.

Suggested actions for Project Management and Steering Committee on the design, implementation, monitoring, and evaluation of the project.

(Further recommendation for Rodrigues are included in final section)

1. Design and Monitoring for Results

→ *Recommendation: large scope– To overcome the project's ambitious design, large scope, and limited funding and to achieve project results, this projects team must focus on monitoring for results by instituting a designated strategic level ME officer in the PMU to support day-to-day monitoring to develop plans and strategies, including site-level links to the capacity development plan. For policy-level results the PMU should develop and monitor all activities, consultants, and partnerships with smarter indicators toward the resilience outcomes at each site, including Rodrigues.*

2. Implementation

→ *Recommendation: Project Management Arrange a meeting for UNDP and GOM to discuss arrangements for securing all PMU-based contracts through end of project, including the PM and others currently involved.*

→ *Recommendation: Slow procurement–Ensure that the options for fast tracking procurement are considered and an agreement is reached by January 2015 to facilitate faster procurement, based on NIM modality and by extension following the local procurement law.*

→ *Recommendation: Reporting–Ensure that the reporting of government co - financing, in particular for office support, human resources, and government financing of "works" and human resources at site level is done systematically through project end. Record this data in an easy-to-use monitoring and reporting system for purposes of AFB/UNDP at end evaluation.*

→ *Recommendation: Community engagement– Find solutions for strategic and intensive community liaison work and for instituting policy-level changes related to that engagement, including developing a strategy for and hiring of designated community-based project facilitators to engage with project management for each site, including Rodrigues. Designate a focal point at PMU to oversee community-based relations for each site, setting up a mechanism for community-based planning for CCA CCZ in each site by developing a technical planning committee linked to the planning mechanism and ongoing initiative (ongoing vulnerability planning exercise, strategy for women's economic empowerment related to mangrove sensitization and branding, and coastal zone product development).*

→ *Recommendation: Knowledge management and Monitoring* – This is cross referred to *ME recommendation to designate a PMU level ME officer, designate an ME/KM/CB officer, hire a short-term consultant to design a technically vetted ME/KM/CB plan for future implementation and strengthening of the new ME officers capacity for KM oversight. The advisor on KM would be developing the basis for a longer-term KM system for CCA CCZ in Mauritius. This is the role for the AF PMU with a view that it will continue in MOE post project. In line with learning from visits to pilot sites, including Rodrigues, the PMU can become an excellent platform for cross-sectoral coordination for climate change adaptation and EW at the level of the CC impact researchers and for engagement with the site-level communities. The knowledge management system might be designed to facilitate working-level linkages of the various groups and committees and enable involvement of the different project-level communities in project-level decision making and future work planning. A good web interface and knowledge portal with a designated KM officer to be responsible for facilitating these linkages should be established, enabling an online platform for the work of the project set up.*

→ *Recommendation: Policy Advocacy – PMU to develop and share a policy paper on cost benefits and the institutional framework being piloted, planned, and needed. This will help stakeholders undertake the risk of no action, the cost of future investment, and the policy changes required for CCA CCZ.*

→ *Recommendation: Policy Advocacy–Frame CCA CCZ by fashioning a good communication strategy linked to the knowledge management strategy (see recommendation KM) in order to ensure that the work and risks are understood and the costs are articulated to the public and the policy makers.*

→ *Recommendation: Policy Advocacy–Assign a high-level political (or other popular and influential champion), possibly through PMU, whom has wide knowledge of activities that impact the future direction of CCA CCZ on Mauritius. Branding this project is a very important aspect of a movement toward sustainable development and community-based resilience in the coastal zone.*

3. Monitoring and Evaluation

→ *Recommendation: Monitoring and evaluation* –Designate *full time ME/CB/KM officer at PMU (cross-reference with KM recommendation below).*

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Recommendations: Outcome Level

Rec #	Recommendation	Entity Responsible
A	**Outcome 1: Increased adaptive capacity with relevant development and natural resources sectors**	
A.1	**Key Recommendation:** Develop a community engagement strategy covering all sites. It should consider smarter indicators for community resilience, sustainability and scale-up plan. Currently, work with communities is ad hoc and not considering changes required in terms of the community level coastal zone adaptation approaches. The implementation strategy should clearly target the development of a new protocol or convention that empowers communities in the decision-making and planning processes concerning coastal zone adaptation measures.	Project Management Unit PMU /UNDP support
A. 2	**Recommendation:** Cost Benefit Analysis CBA methods promoted throughout government by the consultants through learning by doing approach and in media to sensitize public about costs /benefits of adaptation. Project team develop a training and capacity building plan to shadow the use of Cost Benefit Analysis CBA in sites with government counterparts.	Project Management Unit PMU/Consultants for outcome one and two
B	**Outcome 2 Reduced exposure at national level to climate-related hazards and threats**	
B.1.	**Key Recommendation:** Flood data collection agreements. Project team can provide an incentive (small project) to MOI to develop a regional cooperation partnership agreement on a regional data sharing agreement to increase reliability of the flood surge system.	PMU /SC
B.2	Recommendation: Scope and present the co-financing options for the expansion of the EW system to sea swell risk.	PMU /SC
B.3	Recommendation: Include Rodrigues administrators in design of an Early Warning system. Consultants to visit Rodrigues and/or hold meetings with stakeholders on the island.	PMU /SC
C	**Outcome 3 Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses**	
C.1	**Key Recommendation**: Develop (WRITE DOWN) a capacity development strategy that includes training activities for institutional capacity building strategy;	PMU /UNDP
C.2	Recommendation: Impact assessment and dynamic monitoring of Capacity Building CB exercises. Examine and document the use made of the training. It is pertinent to know whether the trainees are working in institutions that have coastal management and adaptation as mandates and whether the expertise so gained strengthened the capacity of the institution in that area.	PMU /UNDP
C.3.	Recommendation: Develop (WRITE DOWN) a long term international learning strategy that include the long term learning linkages i.e. those established such as with UoM and the University of Pretoria and Madras. , on paper. These external organizations are service providers, and there is currently no written strategy for further international cooperation longer term and also for project reporting.	PMU /UNDP
C.4.	Recommendation: Gather evidence on how institutions are benefiting from the project activities and are able to initiate measures or policies that would address the risks of accelerating coastal erosion rates without increasing the climate change risks in adjacent properties, which induces ever-increasing costs related to repair of coastal infrastructure and leads to further losses of beach tourism revenues.	PMU /UNDP
D	Project Implementation & Adaptive Management	
D1	**Key Recommendation:** Conduct a policy review / study. Integrating climate change adaptation across all relevant institutions and departments is critical and can be effectively supported by a strong coordination mechanism so as to ensure sustained engagement of various sectors and stakeholders in adaptation measures. Ensuring the success of the project requires ensuring efficient institutional mechanisms under one lead institution that commands authority sufficient to bring agencies under one umbrella covering all aspects of climate change and disaster risk management activities. MTE draws attention to the fact that	PMU

	adaptation interventions cut across many sectors and are implemented at different geographical levels. The project team can do baseline research and prepare the necessary groundwork to advocate for systemic approach to adaptation. This will only be achieved in the long run by facilitating the strengthening of the proposed institutional framework through bringing all climate change interventions under one umbrella located within the highest level of the national decision-making structure.	
D2	Recommendation: Develop a policy change monitoring framework. The technical committee and an advisory board can provide the project with a framework for guiding the project team and monitoring achievement of deliverables. It is recommended to augment these mechanisms with representation of key actors that would enhance project implementation. In this case, Ministry of Finance and Economic Development would be a good choice, for reasons linked to procurement of goods and services earmarked under the project but more importantly because of an investment decision that would need to be made in the replication phase. Having a representation of MOFED in the project's institutional framework would give the team access to useful guidance on procurement procedures and ways to respond to them. Other institutions, albeit for other purposes linked to the project implementation, might also be considered. Possible cases in point could be the National Disaster Centre, the Ministry of Education, RRA, and relevant NGO's. It is imperative that the level of stakeholder ownership, including ownership by government and semi- or decentralized government agencies and other key stakeholders, be secured at this phase of the project and that it is adequate to allow for the project outcomes/benefits to be sustained.[i]	PMU
D.3	Recommendation: Develop KM and learning activities (including writing a strategy) to support the improvement of climate related coordination and environmental monitoring system. There is structural need for more systemic/functioning national climate related environmental monitoring system in Mauritius. With the new government, the Ministry of environment now also holds the portfolio of disaster management which is positive. The former scattered monitoring system of all coastal zone adaptation interventions and responses can be avoided. The MOESD is a sectoral ministry with the environment mandate, but it lacks the authority in some areas of intervention.	PMU
D4	Recommendation: Oversee the development of a draft policy framework for integrated M&E framework for CC in CZ adaptation. This should be more closely aligned with development planning through, for example, the incorporation of adaptation M&E into existing national development frameworks. Institutional arrangements should identify clear roles and responsibilities for the involvement of stakeholders at all policy levels.	PMU
D5	Recommendation: Mainstreaming Support. The project team can consider activities to direct project hired consultants to assist the project team in preparing guidelines for formulation of district- and community-level adaptation plans and promoting a participatory dialogue with all stakeholders at district/village level for preparation of district adaptation plans incorporating priorities of coastal resources and coastal degradation management. Institutional arrangements need to provide an environment that encourages and supports the exchange and sharing of information at all stages of the adaptation process. With the assistance of consultants being recruited, the project should be able to promote (high visibility) mainstreaming adaptation into policy and investment decision-making processes. According to the project team, recommendations to change the guidelines are needed. MTE recommends going beyond mere recommendations to use the project as an advocacy measure to push forward legislation.	PMU
E	Sustainability	
E.1	**Key recommendation**: Designate a KM/ME/CB officer.	PMU
E2	Recommendation. A related concrete recommendation is to support the newly designated officer by recruiting a short-term consultant to help design a KM/ME/CB plan for future implementation. KM international input can be leveraged to help build a system and support capacity development of the ME officer for KM/ME/CB oversight. The advisor on KM/CB/ME is tasked to demonstrate/practice the longer term KM system (result) for CCA coastal zone in Mauritius as the system should remain in place at project closure in order to continue as CCA CCZ learning and a cross-sectoral collaboration tool.[ii]	PMU

Project Ratings

Measure	MTR Rating	Achievement Description
Project Strategy	N/A	
Progress Towards	Objective Achievement Rating: (rate 3. scale)	

Results	Outcome 1 CCA sites Achievement Rating: (rate 3. scale) Satisfactory	See recommendations and description above Procurement completed and project implementation underway... Satisfactory coordination between outcomes related to these results happening.
	Outcome 2 EWS Achievement Rating: (rate 3 scale) Satisfactory	See recommendations and description above Procurement completed and project implementation underway... Satisfactory coordination between outcomes related to these results happening.
	Outcome 3 Capacity Building Achievement Rating: (rate 3 scale) Satisfactory	See recommendations and description above Excellent initiatives on training and work with the University of Mauritius undertaken including MOUs for longer term CCA learning.
	Outcome 4 Achievement Rating (rate 2 scale) Marginally Satisfactory	See recommendations and description above Work planned
	Outcome 5 Achievement Rating (rate 2 scale) Marginally Satisfactory Etc.	See recommendations and description above Needs more technical support and attention to two way information sharing and learning system.
Project Implementation & Adaptive Management	(rate 3 scale) Satisfactory	See recommendations and description above See concrete recommendations above
Sustainability	(rate 3 scale) Medium Likely	See recommendations and description above. Attention needed to policy learning and costing of CCA options and EWS in order to make a concrete judgment on scale up...

2. INTRODUCTION

- **Purpose of the MTE and objectives**

In line with UNDP/AFB Policy, UNDP-supported AFB-funded projects are monitored and evaluated regularly. The Mid-Term Evaluation of this project is to determine progress being made toward the achievement of outcomes and to identify course correction, if needed. Its focus is on the effectiveness, efficiency, and timeliness of program implementation; and to highlight issues requiring decisions and actions; it will present initial lessons learned about program design, implementation, and management. Mid-Term evaluation findings are incorporated as recommendations for enhanced implementation during the final half of the program's term. Through MTE exercises, the donor aims to promote accountability for achievement of the objectives by assessing results, effectiveness, processes, and performance of the partners involved in the AFB-supported activities to date and by making recommendations on improving likelihood for expected outcomes by making adjustments if needed. The results need to be monitored and evaluated for their contribution to global environmental benefits. In general, this Mid Term Evaluation (MTE) includes the following:

- The performance evaluation
- The performance of the direct stakeholders
- The lessons learned and recommendations.

- **Scope & Methodology**

The project log frame is the starting point for this evaluation (Annex 6). The log frame has been reviewed which outlines action and criteria around five Outcomes identified in the original project document. The principles of design and execution of the MTE, MTE approach, data collection methods, and limitations to the MTE are as follows:

- *Performance*
  - The evaluation of the performance will concern 11 criteria of 4 categories that will be scored using the rating tables of UNDP (See table in ES above).

- *Relevance*
  - The relevance of the development objective;
  - The relevance of the project design to achieve this goal, i.e. the extent to which the planned activities were suited to local and national development policies and organizational priorities, including exchange over time.

- *Effectiveness will be measured through these criteria:*
  - The degree of effective achievement of expected results (i.e. the extent to which the objective has-been achieved yearly or how it is likely to be achieved). This includes consideration of the inventory of the results along the lines of the log frame, as well as the positive/negative and foreseen/unforeseen to exchange and effects, produced by a development action to date and the analysis of the validity of the link between claimed entire project activity, results, outcomes, and impact. AFB/UNDP terms and results include live project outputs, short-to-medium term outcomes and impact in the long term, including global environmental benefits, replication effects, and other local effects. It will consider factoring impacts (positive or negative) that might have influenced the project.

- *Efficiency or cost effectiveness will be measured* on schedule (defined in terms of performance schedule over the actual implementation schedule) and through the efficient use of resources (hardware implementation forecasts).

- *Sustainability will be analyzed based on* financial validity, institutional sustainability and capacity building, ownership and sustainability of partnerships, and environmental and social sustainability.

- *Lessons learned and recommendations:* This part will focus on the sustainability and the risks (probability and magnitude of risks related to the continuation of both funding and activities, as well as technical, social, political, and environmental aspects). The recommendations will be specific, realistic, and verifiable.

The average score of the project performance will do the following:
- Use an evaluation matrix (Annex)
- Ensure a clear and common understanding by researchers, clients, and stakeholders of the approach and methods to be used in the evaluation;
- Ensure consistency in the approaches used for the evaluation themes and comparability of the findings. Where possible, inter-connected questions/issues will be cross-referenced in the matrix. This sets out clearly the sources of information and chain of reasoning used in deriving the evaluation conclusions and facilitating evidence-based findings and recommendations. The evaluation matrix and its related products (the related questionnaires and indicators) provide a framework for the overall MTE report that is consistent with the ToR.

By the end of country mission, the evaluation team (national partners, international consultant, national consultants, and UNDP, AFB, and local beneficiaries) will have answered together core questions about *what we are doing (design), what has changed, whether we are doing the right thing, and what can we do to make it better* (recommendations and l*essons learned).*. The draft program of the consultation (including field missions October 27-November 21, 2014) is provided in the Annex). An inception dialogue with the evaluation team was held shortly after the international consultants had arrived.

Limitations

The evaluation is early, reflected by the low delivery 6% due to late implementation start linked to procurement delay issues. The typical MTE evaluation focus on results has been adjusted to consider planning and bottlenecks for potential results.

- **Structure of the MTE report**

The report has six main sections: 1. Introduction; 2. The Project Description and Development Context; 3. MTE Findings, including Sections *3.1. Formulation, 3.2. Implementation, and 3.3. Results;* 4. Conclusion; 5. Recommendation and Lessons Learned; 6. Annexes.

3. PROJECT DESCRIPTION AND BACKGROUND

- ***Development context: environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope***

The Republic of Mauritius (ROM) is a group of islands in the southwest of the Indian Ocean, consisting of the main island of Mauritius, Rodrigues, and several outer islands located at distances greater than 350 km from the main island. As a Small Island Developing State (SIDS), the ROM is particularly vulnerable to the adverse effects of climate change, especially in the coastal zone, where a convergence of accelerating sea level rise and increasing frequency and intensity of tropical cyclones (with more intense rainfall events and stronger winds) will result in considerable economic loss, humanitarian stresses, and environmental degradation.

The visible and measurable effects of climate change in the coastal zone of ROM have become more apparent over the last ten years. There is a direct linkage between climate change effects on coastal ecosystem services (especially coral reefs and lagoons) and the integrity of the whole coastal zone of ROM. As coral reefs lose the race with sea level rise, it is imperative that the critical ecosystem function of wave attenuation be replaced in some manner. Adaptation therefore requires *in situ* changes in behavior and site management and appropriate technical interventions as well as early warning systems that provide enough time for communities to move away from areas where the risk of storm surge and flooding is imminent. Storm surges and wave swells are expected to be aggravated through sea level rise and climate change effects on weather patterns. This will compound underlying trends of increasing coastal erosion and pressure on scarce land resources and increase physical vulnerability of island populations, infrastructure, and livelihood assets.

The Government of Mauritius has secured funding from the Adaptation Fund AFB for the implementation of the project "Climate Change Adaptation Programme in the Coastal Zone of Mauritius." This fund, set up under the Kyoto Protocol of the United Nations Framework Convention on Climate Change, is targeted to assist developing-country parties to the above protocol that is particularly vulnerable to the adverse effects of climate change in meeting the costs of concrete adaptation projects.

- ***Problems the project sought to address: threats and barriers targeted***

The following section clarifies the climate change scenario for ROM in terms of future predictions, current trends, linkages to coastal functions, the observed vulnerabilities of coastal areas of ROM, and the social and economic importance of these vulnerable coastal areas (i.e., the implications of *not* adapting).[ii] The IPCC regional models, including the Indian Ocean, indicate the following future climate scenario for the region:

i. an increase in mean annual temperature of up to 3.8°C by 2100 (an increase of 1°C has already been observed in Mauritius in the last fifty years;[iii]
ii. a declining trend in total annual rainfall, but an increase in the frequency of intense rainfall episodes (both have already been evident in Mauritius in the last 50 years;[iv]
iii. sea level rise (SLR) of 18–59 cm by 2100 (the current rate of SLR in Mauritius indicates about 35 cm, if the rate remains constant over the next 90 years;[v]
iv. An increase in the intensity and rate of intensification of tropical cyclones (already evident since 1975.[vi]

Despite the relatively long time horizon for these possible climate changes, and the fairly wide range of predictions, the concern in ROM is very immediate and the call for practical adaptation policies and measures is now louder, reflecting a variety of important factors. For example, assessment of the potential cost of repairs to coastal roads on the island of Mauritius damaged by wave incidence and erosion during a four-meter wave run-up storm indicates USD 20 million[vii] could be saved during each storm if the present coastal infrastructure were protected and if all future coastal infrastructure were properly

designed and located for climate resilience (using the guidelines to be developed in the program). The total project budget is USD 9,119, 240 (including the IA fee). The project was initially designed to be implemented in five years (2012–2017). Following delays in initial procurement, a one-year extension was approved by AFB following the submission of 2013 Project Performance Report (PPR).

- ***Project Description and Strategy: objective, outcomes and expected results, description of field sites (if any)***

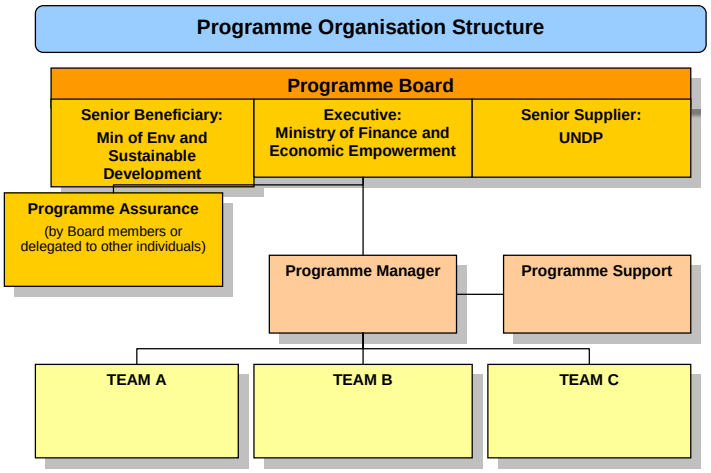
The overall **goal** of the program is to assist developing-country parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change in meeting the costs of concrete adaptation projects and programs in order to implement climate-resilient measures. The **objective** of the program (becoming evident by the end of the program) will be *increased climate resilience of communities and livelihoods in coastal areas in Mauritius (all islands).*

The goal is to be supported by achievement of the following **outcomes**:

- Increased adaptive capacity within relevant development and natural resource sectors (short title, *Application of Adaptation Measures for Coastal Protection*);
- Reduced exposure at national level to climate-related hazards and threats (short title, *Early Warning System*);
- Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses (short title, *Training*);
- Improved policies and regulations that promote and enforce resilience measures (short title, *Policy Mainstreaming*);
- Effective capturing and dissemination of lessons from the applied activities in the program (short title, *Knowledge Dissemination and Management*.

- ***Project Implementation Arrangements: short description of the Project Board, key implementing partner arrangements, etc.***

The program is implemented with the Ministry of Environment and Sustainable Development (MoESD) supported by a PMU set up by project, taking the lead role in facilitating the logistics and delivery of all program components, with each of the participating government agencies taking a technical lead for specific activities. MoESD is responsible for management oversight, monitoring, and evaluation and procurement of all equipment and technical services (using standard UNDP procedures), as a Multilateral Implementing Entity. The Programme Board is responsible for making management decisions for the program, in particular when guidance is required by the Programme Manager. All project decisions will be taken at the level of the project board chaired by MoESD comprising the relevant stakeholders and UNDP CO representative.



The Project Manager has authority (according to the ProDoc) to run the day-to-day work on behalf of the Implementing Partner (Ministry of Environment and Sustainable Development), reporting to the Director of Environment, within the constraints laid down by the Project Board (Described above). The Programme Manager's prime responsibility is to ensure that the program produces the results specified in the program document, to the required standard of quality and within the specified constraints of time and cost.

Project Board PB/Steering Committee SC the Project Board/Steering Committee was established for oversight and decisions concerning implementation. The first National Steering Committee meeting took place on July 24, 2012, during which the mandate was articulated. Review of subsequent meetings show that the Programme Steering Committee and its various program activities provides opportunities for discussing appropriate institutional structures and processes for adaptation in coastal areas and consensus for roles for all relevant ministries/agencies. Within the Program Board, the primary function is to provide guidance of the program. Suggestions for improving the work of this Board are offered in the sections below.

Technical Committee TC An operational committee has been formed (last meeting during MTE in Oct 2014). Although no formal ToR has been developed for this Technical Committee (interview November 14, 2014 with PT), MTE joined a TC meeting on Oct 30, and it became clear that this key working and formalized committee is meeting regularly (based on the meeting minutes). MTE feel TC member can be more involved in site level learning during implementation. For best results, the MTE believes that the technical committee ToR can also be formalized. The participation was reviewed for private sector and NGOs, and this was observed to be the case. This is positive.

- ***Project timing and milestones***

The project was intended to be implemented over five-year period. The ProDoc was signed in July 2012. Implementation of the project started effectively in September 2012. The inception workshop was held on August 30, 2012, in the presence of all stakeholders of ministries/departments, parastatal bodies, research institutions, UNDP, the local community representatives of Quatres Soeurs/Deux Freres, Rivière des Galets, and Mon Choisy. The opening ceremony was also attended by Hon Devanand Virahsawmy, Minister of Environment & Sustainable Development, Hon Louis Herve Aimee, Minister of Local Government, Mr. Simon Springett, UNDP Resident Representative, and Mr Jean Claude de L'Estrac, Secretary General Indian Ocean Commission.

MILESTONES	EXPECTED DATES
Start of Project/Program Implementation	August 2012
Delay in delivery due to procurement issue 18 months	September 12–Sept 14
Mid-Term Review	January, 2015
Project/Program Closing	July January, 2018
Terminal Evaluation	Original October 2016 - Changed to October 2017

- ***Main stakeholders***

The key program partners (involved in the various technical teams) include the following:

- Ministry of Environment and Sustainable Development
- Ministry of Finance and Economic Development
- Ministry of Housing and Lands
- Ministry of Fisheries and Rodrigues
- Ministry of Public Infrastructure
- Beach Authority
- Ministry of Tourism and Leisure
- Ministry of Local Government and Outer Islands
- District Councils
- Mauritius Oceanography Institute
- Mauritius Meteorological Services
- University of Mauritius
- Relevant NGOs.

4. FINDINGS

4.1. Project Strategy *Rating – Highly Satisfactory*

The project design is ambitious. It has an inter-disciplinary focus on climate change adaptation in coastal zone and imparting learning on technical outcome areas spanning institutions, policy, storm surge Early Warning system, and Climate Change Adaptation on coastal zone measures. The funds are intended to be catalytic with implementation aimed at scale-up to 21 further vulnerable sites as the ultimate result (post project). A high percentage (82% of budget at inception increased to include the EW system) are on concrete inputs including climate proofed infrastructure and "works.

The design is relevant. The program structure, has 82% of funding going to coastal protection measures-works and concrete inputs, 11% on enabling environment (early warning, policy mainstreaming, training), and 7% on knowledge dissemination and management. The project does fit within a broader climate change and disaster risk reduction strategy (CC adaptation strategy–Disaster risk reduction strategy).

It has five components highly relevant to issues observed, and includes very interesting features, including 1. a focus on scientifically informed "works" with concrete outputs; 2. demonstration of implementation based on science and assessments in a phased approach with consideration of options; 3. excellent strategy for procurement of outputs through larger contracts, negotiated and technically vetted with and by intersectoral technical committees (learning from AAP); 4. MOUs developed between MOESD with a range of institutions and state and non-state actors for collaborative linkages and to develop local and

national institutional capacities; 5. establishment of linkages between research, education, and policy, and a learning-by-doing approach, e.g. the resource centre in north reef; 6. implementation through CBOs and NGOs at site level.

MTE finds the project design and strategy relevant in relation to the need for flood risk (sea storm surge) early warning and for imparting a scientifically based cost benefits methodology for assessing adaptation measures, including institutional changes for coordination. Coastal zone adaptation work is currently ad hoc and largely conducted without scientific basis. The key recommendation is to include a focus on monitoring for results and designate an M&E officer within the project management unit to support site level day to day monitoring (develop plans) and monitor site level smarter indicators towards the resilience outcomes at each site including Rodrigues.

Risk Management

The potential program risks were identified in the project document risk framework, along with proposed countermeasures (see risk matrix ProDoc). The basic project assumption is that all program risks are "owned" by both UNDP, as the implementing entity, and the Ministry of Environment and Sustainable Development, as the executing entity, although UNDP has the ultimate responsibility for all financial risks, and the right of cessation of activities or withdrawal of funding in the event of risks that cannot be otherwise managed. The actual key observations at MTE include: **1. political risk:** with the general elections in December 2014 and changes in permanent Secretary PS and Head of Administration, the project needs approval of the new administration (Note: good work by project team to mitigate such political risks: seven cabinet papers have authored and sent to cabinet concerning this project) and **2. For ensuring continuity of core project staff:** there is a need for longer-term contracts for project manager and the core staff, including project intern (discussed further below).

Results Framework/Log frame

Three issues are highlighted: 1. AFB project design, including globally and nationally relevant baseline values is based on global and regional data for climate change; 2. the Monitoring and Evaluation Adaptation fund is unique, depending on scale-up strategy, and has no co-financing requirements; and 3. ProDoc log frame is not flexible for change and adaptive management.,. It is not possible to change log frame as per AF rules although there is a need for "Smarter" indicators linked to country context and theory of change toward a coastal zone resilience outcome in each context.

A project inception workshop was held a month after project signature in September 2012 in which project team agreed on implementation strategy. A summary of the key requests for project management is included in the workshop report.[viii] MTE feels the logical result framework, while relevant, can be improved. Even though a well-structured stakeholder and problem and objectives analysis forms the basis of the logical framework; the CCA and EWS indicators can be improved (smarter and more holistic to take into consideration environmental, social and economic factors and conditions for climate change in coastal zone resilience). The ProDoc alone is not sufficient as a day to day management and monitoring tool for context specific and site level and contextualizing results (more discussion in management and M&E sections).

4.2. Progress towards Results *Rating - Satisfactory*

- **Progress towards outcomes analysis**

Outcome 1 – Increased adaptive capacity with relevant development and natural resources sectors Rating -Satisfactory

Baseline (2010): The beach at Mon Choisy is eroding at a rate of about 2 meters/year; Rivière des Galets is exposed to storm surges, with a failing seawall, openings in the wave overtopping wall, and an inadequate drainage system in the village; buildings in Quatre Soeurs frequently flood during high tides.

Target: No further erosion at Mon Choisy (beach accretion of 2 meters over 3 years); no surge flooding and no further shore erosion at Rivière des Galets; and, no flooding of coastal public buildings at Quatre Soeurs. The target for numbers of beneficiaries follows: Mon Choisy: 1,500-2000 people; Rivière des Galets: 300 people (based on actual survey); Quatre Soeurs: 1000 people.

Outputs:
1.1 Detailed technical assessment of each site, with chronology of previous flood and erosion events and collection of near shore oceanographic data, during "quiet" periods and "active" periods (one month each) to inform the design of the technical interventions at each of the three sites.
1.2 Technical design of coastal protection measures at each of three sites, with detailed costing, carried out in a gender sensitive way.
1.3. Successful construction of physical interventions at each of the three sites.
1.4 Analysis of data and development of recommendations on how the interventions can be adjusted for other vulnerable coastal locations in ROM.
1.5 Monitoring program designed, to include scoping of suitable parameters, including beach width and slope; depth of adjacent lagoonal sediments; wave height, period, and run-up; direction of near shore currents, etc.
1.6 A targeted coastal process/weather event monitoring system in place.

Outcome one includes six expected outputs implemented by one large institutional contract and has been globally procured (for 2 out of 3 sites). The institutional contract component was awarded in September 2014 to Indufur Oy in Finland, in partnership with eCoast in New Zealand, and includes delivery of inputs related to:

1. Detailed technical assessment of each site with chronology of previous flood and erosion events and collection of near shore oceanographic data, during quiet periods and active periods (one month each) to inform the design of the coastal protection measures at each of the three sites;
2. Technical design of coastal protection measures at three sites including costing;
3. Vulnerable physical, natural, and social assets strengthened in response to climate change;
4. Analysis of data and development of recommendations on how the interventions can be adjusted for other vulnerable coastal location in Mauritius;
5. Monitoring program designed to include suitable parameters , including beach width and slope; depth of adjacent lagoon sediments; wave height, period, and run up direction of near shore currents;
6. A targeted coastal process/weather event monitoring system in place.

Pilot work on CCA in the coastal zone is complex and involves targeted investment in planning and design work, pilot implementation and education/documentation to influence behavior change, policy, and up scaling. Outcome one has the largest project investment USD 6,680,440 (following budget revision). The pilots include a combination of works (infrastructural inputs) and also softer inputs (monitoring system, data analysis, adaptation feasibility studies, and education, linked to other project outcome areas) and

strong emphasis of imparting learning to the multi-stakeholder CCADRR group (communities, government and private sector) based on a series of targeted capacity building activities. (Linkages to outcome; for policy activities, formal higher education and demonstrations in sites on how communities can adapt based on different entry points.

The project implementation strategy has been to engage an outstanding qualified, experienced international firm to undertake the site level feasibility; share practices from elsewhere, provide supportive and innovative technology and support the CBA approach capacity transfer. The project management role is thus to oversee the integration of project with in the broader strategies on climate change and disaster risk reduction and to ensure coordination of the outputs making linkages to other four outcomes towards results-resilience on coastal zone in three sites (interview with PM).

Based on MTE engagements with stakeholders involved in the steering committee, technical committee meetings, interviews with the PMU and visit to sites and interviews with the site assessors, the key questions raised by MTE for outcome one included 1. How does the implementation strategy support the capacity development and a dynamic monitoring, learning, and capacity building system to impact on transformative changes desired? 2. How is the project dealing with the unknown high capital investment cost of procuring works for climate proofing works, including for those with a combination of environment, social, economic adaptation options? 3. How is project developing and monitoring indicators and setting baseline values for the holistic design CCA DRR projects? 4. What is the status of work at the three pilot sites?

The processes of procurement and developing a suitable TR was in fact an extensive and thorough exercise (interview with PM, desk review of documents). It was based on a high quality inter-disciplinary design process involving a cross sector teams. It was tediously technically and politically vetted by the project steering and technical committees (in steering and technical committee meetings- minutes). Issues began with delays related to the original bids, which were over budget (over 200%, according to PM) and these delays were compounded by a slow but diligent procurement process. This led to a decision to reduce the scope without compromising the outcome, i.e. team reduced the number of days and of work during the cyclone season and monitoring period. The scope of work for outcome one would include that what was in the RFP and beyond, including: inter-disciplinary site and options assessments, modeling, and monitoring system for the implementation of works at three sites, including 1 Mon Choisy beaches, 2 Rivière des Galets, including relocation, and 3. Quatre Soeurs, construction of a refuge centre (separate procurement process, land purchased by GOM as contribution to project) and mangrove plantation at Quatre Soeurs/Grand Sables by local NGOs.

The award for outcome one went to Indufur-Oy, a Finnish firm in September 2014. MTE met with members of team (October 29, 2014), consisting of 6 specialists: 1. Environmental Economist 2. Coastal Engineer, 3. Coastal Zone modeler, 4. Oceanographer, 5. Marine Biologist, and 6. Local Engineering counterpart. A key question raised was whether a social scientist was needed as a complement. The MTE was assured that the environmental economist had background in particular for conducting vulnerability assessment, household survey, and social assessments, especially in relation to the relocation option at Rivière des Galets. The contract and feasibility work is estimated for at least 6 months, including development of baseline for future work at the 2 sites. This is with plans to inform 21 more vulnerable sites with methodologies for analysis, modeling, and concrete recommendations for a coastal zone monitoring system. The feasibility report with optimal site options is expected and highly anticipated in March 2015 (interviews with steering committee members). Key MTE reports with extensive observations and recommendation on the indicators and work at sites including Rodrigues are included in (Annex 3).

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Outcome 2 – Reduced exposure at national level to climate-related hazards and threats
Rating - Satisfactory

Baseline: *(2010) MMS provides warnings to shipping based on perceived wave climate, and cyclone warnings for the general populace, but this system does not anticipate rogue swell conditions.*

Target: *By 2013, more than 3,400 people in current surge zones are able to safely evacuate prior to future storm surge events (There are no people left in the surge zone when the surge hits).*

Outputs:

1.1 Assessment report of the current sea state monitoring systems (Mauritius meteorologist services MET and Mauritius oceanographic institute MOI) will include an estimate of the required critical parameter and operational requirements for an early warning system.
1.2 The early warning system installed and implemented (to link with existing early warning systems for cyclones) with communication established to the national coast guard at headquarters down to coastal communities.

Outcome two is contributing to the project development goal to build a culture of resilience in the highly vulnerable areas of the coastal zone and affirmative action to protect and save lives in the event of a climate-related disaster (Meeting with stakeholders involved in project and implementing the NDRR Strategy 2013). Based on the reading of the AFB project document, an assessment of the current sea state monitoring systems and an Early Warning system should be developed. Both activities should "*consider the usefulness and practicality of the sea surface satellite data at the Mauritian Oceanography Institute and the Mauritius Metrological Services that provide warnings to shipping based on perceived wave climate, and cyclone warnings for the general populace, but does not anticipate* ***rogue swell conditions****, which are not always due to cyclones, but sometimes caused by convergent weather systems far from ROM. The consequence is that those vulnerable coast communities cannot prepare for potential surges and flooding, and suffer stress and insecurity during periods of heavy seas, and actual loss of goods and buildings*."

The implementation strategy for outcome two is (interview with project management unit) 1. to issue a quality focused institutional contract to international firm for the assessment and the design of an early warning system and focus on a wind based storm surge and/or tidal waves flood in response to the above stated problems (surge risk reduction) intentions, 2. to design the EW system to fit within the larger context of the pilot interventions and broader project goals and in particular to be thought through about in connection with the pilot of Refuge Centre (Quarter Soeurs) and to prepare the system for piloting testing across the islands through outcome, 3. to partner with key stakeholders considered in the Early Warning system for flood risk including oceanographic institute and meteorological services (MET and MOI services) in order to build their capacity and consider longer term learning system and capacity development needs, 4. to undertake concurrent pilot work on reducing flood risk through climate proofing site including environmental engineering and ecosystems based adaptation solutions to reduce risks to climate related storm surge. The PM is currently waiting on a recommendation of the EW team concerning the assessment of the need to purchase of any hardware/infrastructure (wave rider) related to this type of early warning system.

MTE learned that the initial work plan made provision for a budget of USD 133,795 for this component (ProDoc) and has proved an oversight and design flaw. For instance, even with budget rescheduling (as approved by AFB following submission of 2013 PPR), this outcome area work is under major budget constraints. Despite this, the project team developed a strategy to not compromise integrity of design and have contractors build a practical yet basic and principled based EW system, including the capacity building elements. It will focus on floods caused by wind (not swell). Again and as with Outcome 1, the budget was clearly insufficient as compared to the scope of work and the bids received during first procurement exercise were over budget by almost 400% (PM interviews). As per steering committee meeting minutes #8, the budget for outcome two was rethought, and a new work plan and budget allocation was endorsed by the Financial Secretary, the designated national authority, and subsequently approved by the Adaptation Fund Board (AFB) on 22 May 2014. This budget was increased with a shift from outcome four and five (report of PM).

Early Warning System for Storm Surge

The MTE held one to one and in group discussions (Nov 10-Nov 15, 2014) with Deltares (Netherlands based) successful bidder. The early warning system will be designed based on tidal surge and storm primarily winds related data from the Met services. The system will focused on early warning to storm and tidal surge, which is the water level focus (push by the wind). As wave surge is a significant issue due to swell from the south east ocean (discussions during EW inception workshop), this is a constraint. In fact the system to be designed in partnership with MET and MOI services will be numerical ***models (one for each island (Mauritius, Rodrigues, Agalega),*** with possibility for extension, and can host data from many sources including the swell and rain fall conditions (key aspects of disasters in Mauritius to date). The results will be a **software** package that uses modeling to create a reliable forecast. The project budget will also cater to the purchase of appropriate hardware/equipment as a concrete input for EW system integrity. The team learned that reliability of the system is a key design factor and the system, but only as reliable as the data sources it can identify. This means the assessment of partners for data sharing will be important.

A key problem is the maintenance and collection of data and agreements for cross sector data sharing and even for international data sharing (in the absence of national data collection tools). These issues are important for reliable forecasting and for accurate evacuation calls. The maintenance of the expensive infrastructure is also important, i.e. buoys. The team leader stated that Mauritius has two buoys, one maintained by the meteorological services, which is in need of reparation, and one by the Mauritian oceanography institute MOI. The issue is coordination and maintenance of these to support a reliable forecast. In addition, the more buoys, the more reliable is the system, so the idea is to partner with regional institutions to access more wave data from other countries and institutions in the region. Another key lesson is that procurement equipment should accompany and training for maintenance. The coast guard is a likely manager for support for at-sea infrastructure while the data input is cross sectoral collaboration issues.

Thus, the final scope of work is to develop a storm surge data collection system with software and capacity development aimed at reliable decision making. The system will be geared up as a probabilistic forecast because of the uncertainty of forecasting. The overall output will be a **software platform,** using models to set up and create forecast for use. But for this, Mauritius needs high functioning computers for a high value system but can look to this in future once the system to be built provides utility. In essence, this means that investment into a high value system investment will need to be justified. This should be an objective of the project: to test and demonstrate the utility of the system being put in place and to

expand on it thereafter with further investment by government. In addition the reliability of system will also depend on having a capable forecaster with expertise to make judgments (with capacity development consideration for project). The system will be built upon to include wave modeling in the future based on sea swell to generate the most probabilistic and deterministic forecast to storm surge. The current design will only focus on water level pushed by the wind but with aims to include a future focus including resources on the wave height and swell effects. The key recommendation at MTE is to ensure that data sharing agreements are in place and that consideration of the future partners including agreements and that the necessary collaboration between NDRM, MET and MOI services are clear, supported (with activities and inputs if necessary), and that collaboration protocols are firmly established by the project.

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Outcome 3_– Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses Rating -Satisfactory

Baseline (2010): *(2010) public agencies are unclear on their obligations regarding management of climate change effects in the coastal zone, and the private sector and general populace do not know what options there are for coastal adaptation, or how to initiate such measures in the most practical, cost-effective manner.*

Output targets:
3.1 A handbook on coastal adaptation packaged as training modules for coastal communities, relevant government agencies, NGOs and CBOs, and private sector stakeholders (such as hotel operators) and training sessions delivered on a regular basis throughout the program (at least twice annually), supported with regular training-of-trainers sessions with NGOs and CBOs;
3.2 A short course on coastal engineering designed and delivered (twice during program period); four short courses have been delivered by Dec 2014 (i.e. ahead of schedule with training imparted to 265 staff from the public and private sector).

3.3 A specialized course on cost-benefit analysis of coastal adaptation measures designed and delivered (annually over four years). This outcome is essentially geared toward enhanced capacity, in the form of systems building, structures, processes, networking, and partnerships critical to sustainability with regard to policy dimensions of adaptation as a basis for integration, engagement, knowledge sharing and investments, the legal framework, and enhancement of coordination.

Need to strategize
The MTE stresses the continued need to strategize the training activities so they form part of a clear institutional capacity building strategy. Though the baseline refers only to public agencies, a wider array of entities is to be included under the ambit of "institutions district and village councils, local NGO, and even informal groupings at village levels, such as local sports clubs. The ultimate objective should be institutions with enhanced capacity in the form of systems building, structures, processes, networking, and partnerships critical to sustainability. MTE learned that this training is already being delivered at two different levels: 1. professional course targeted for the engineers and coastal practitioners from relevant got institutions, including local authorities and private sectors; 2. training of coastal communities, NGOs, CBOs (grassroots level).

However, the MTE views that in the present circumstances, the number of staff trained could be an appropriate proxy, provided that reference to the institutions they belong to is made clearer/more visible to stakeholders and donors. The project team is encouraged to report on the effect of training activities on the institutions.[ix] The MTE team therefore suggests that the project team makes it clear whether the training offered to the staff will lead to a clearer definition of the respective roles of the institutions they belong to in the program area. A feedback survey on the impact of the training is also conducted upon completion of the training program. Also noted was the invitation to attend the courses is tendered to the CEO of the respective institutions, who ultimately appoints the most appropriate staff.

The project team has reflected on indicators for the outcome on institutional capacity building. The institutional capacity building activities should show that the project has laid the groundwork for the required institutional structures and processes for proper coastal adaptation and enhanced coordination among all actors.

To assess the extent to which the capacity of institutions has been strengthened, it is necessary for the project team to collect evidence showing how environmental principles and procedures are helping relevant institutions to perform their jobs as mandated and obliged by government policy.

Enhanced coordination
MTE views that one area where institutional capacity building may make a difference is coordination. Through training of staff of agencies involved (including MOESD), the project may instill the use of knowledge management approaches for cross sectoral coordination. The MTE team suggests that the project team, in furtherance of its institutional capacity building role, it can continue to aim at capacity strengthening for broader cross-sectoral management and planning, enforcement, and sub national implementation.

Multi-sectoral approach
Institutional capacity building for CCA is also meant to develop partnerships as climate change is a multi-sectoral issue. Adapting to the impacts of climate change is closely intertwined with development choices and actions that cover a variety of sectors. With these considerations, such partnerships are to be viewed as opportunities for synergies and trade-offs between adaptation and mitigation activities, including possible negative and positive side effects.

Capacity building and decision making
Regarding cost benefit analysis of coastal adaptation measures, there is a capacity building objective in respect to hotel operators and government agencies that undertakes ad hoc measures to protect their individual coastal territories or public areas. It is useful to gather evidence that shows these institutions are able to initiate measures or policies to address the risks of accelerating coastal erosion rates without increasing the climate change risks in adjacent properties, which would induce ever-increasing costs related to repair of coastal infrastructure and lead to further losses of beach tourism revenues.

The project has not yet assessed whether the training contributed to an enhanced engagement of higher-level government staff and decision makers in terms of understanding the benefits of adaptation against a perception that it is a constraint to development or has an apparent high cost.
CBA capacity building is to be replicated to target project managers. As observed at output 1, the approach to deciding on the best case option is the cost benefit analysis CBA approach, which is quickly becoming a flagship product and brand approach associated with this project.

Partnerships

Capacity building of individuals from institutions has opened the door to the establishment of partnerships with private sector and CSOs. The AF project has enabled the collaboration with the following international universities: IIT Madras (India), University of Delaware (US), University of Southampton (UK) for an effective delivery of the courses and ensuring the best knowledge transfer from these leading institutions in the field of coastal engineering. With regard to the CBA courses, partnership has been established with the Centre of Environmental Economics and Policy in Africa (CEEPA), based in South Africa. Through consultative workshops and steering committee meetings, the MTE draws attention to the sustainability of these partnerships, which, though based on a signed MoU, are time bound.

Effectiveness of the MoU

The MoU is the instrument in support of the partnerships established between the MOESD and the respective institution. These documents, though witnessing the engagement of the partners, are time bound, and this raises the issue of sustainability unless they are accompanied by the written strategy of the partner that clearly indicates what it intends to do at the expiry of the MoU. The university is a service provider whose ownership of the project will need to go beyond the terms of the MoU. The project has also supported the UoM in setting up of a Post Graduate course in coastal engineering. The first intake is August 2015. This is a clear evidence of the sustainability of the training program under the AF project. One of the most sustainable outcomes of the project will be the creation of a coastal engineering module in the civil engineering curriculum, and this will be proposed by the UoM continuously as from 2016. The same applies to NGOs benefiting from project funds for capacity building activities.

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OUTCOME 4 – Improved policies and regulations promoting and enforcing resilience measures Rating – Marginally Satisfactory

Outcome target: All relevant policies, strategies, plans, and regulations are consistent in 1. having a clear vision statement for adaptation in the coastal zone, 2. recognizing climate change impacts in the coastal zone over the next 50 years, and 3. having clear government institutional responsibilities for adaptation in the coastal zone.

Baseline: (2010) Current policies and regulations are inconsistent with regard to management of climate change effects in the coastal zone (they do not envision the coastal zone in 2060) and do not provide clear guidance or incentives for practical implementation of adaptive measures.

Output targets:

4.1 A National Coastal Zone Adaptation that addresses all perceived climate change risks in the coastal zone of ROM over at least the next 20 years, with recommendations for supporting policies and regulations.

4.2 A set of recommendations on best technical and institutional adaptation practices suitable for the coastal zone of ROM.

4.3 Definition of the required structure and processes for one "clearinghouse" for climate change oversight in the coastal zone of ROM (a unit or institution, or collection of individuals from various agencies which is able to make final decisions on the climate appropriateness of future development projects, also having a follow-up enforcement capacity).

4.4. Recommendations for new economic instruments.

If it is viewed that the country may be experiencing unprecedented weather events and that the project addresses a national security problem with risk of loss of development gains and life losses, it will be necessary to emphasize the need for enhanced mobilization of resources and a *strong institutional framework and policies for adaptation to climate change.*

This part addresses the issue of the institutional framework and policy dimensions of adaptation basis for integration, engagement, knowledge sharing and investments, the legal framework, and enhancement of coordination. At present there is no specific responsible entity mandated within line departments for climate change adaptation and DRM. The new challenges require a re-definition of CCA- and DRM-related tasks and responsibilities under one authority, including partnerships and networks with other stakeholders.

Advocacy for policy change is needed that would enable the project objectives to be well integrated into the local organizational and administrative culture and positioned in decentralized systems.

Legal framework

The adequacy of legal frameworks, policies, governance structures, and processes in promoting the sustainability of project outcomes is an essential element in a pilot initiative having the obvious ambition to be replicated in other geographical areas. As per the project document, current policies and regulations in ROM are inconsistent with regard to management of climate change effects in the coastal area and do not provide clear guidance or incentives for practical implementation of adaptive measures. It is not envisaged here (MTE) to assess the extent of the inconsistency, but the measures proposed must be considered carefully to address the issue as to whether they are adequate and whether their implementation will lead to the expected results.

This output is essentially at the planning stage. The project team will therefore have to guide the consultants to be recruited to look into the EIA guideline formulation with respect to coastal protection and rehabilitation works. Regulatory requirements and guidelines will require effective dissemination and enforcement (and therefore be captured in policies and codified), as well as supporting policy and economic incentives to encourage private sector compliance with the prescribed best practices.

The consultants to be recruited would provide recommendation for coastal monitoring program that will be part of an environment Management Plan (EMP), as required by law. MTE suggests that the project not stop at the stage of recommendations. Through outcome five, project team can reinforce this work with policy advocacy around this aim.

But there is more than the EIA guidelines to look at. The Building Act, legislation on zoning and land planning, town and country planning, and the whole series of environment-related legislation, just to mention a few, must also be addressed. Developing policies will need to take into consideration the multi-sectoral dimensions of the climate change issue. Since adapting to the impacts of climate change is closely intertwined with development choices and actions that cover a variety of sectors, such policies will require extensive consultations across a wide array of public agencies to ensure that enforcement is not subsequently challenged. The project will provide resources and support for the development of National Coastal Zone Adaptation plan which will cater for this aim. In addition, project team plans to continue to advocate for policy change to address a concern raised regarding businesses (especially hotel operators) and government agencies that persist in undertaking *ad hoc* measures to protect their individual coastal territories or public areas. As mentioned earlier, such policy advocacy and debate can be done through outcome five concerning knowledge management. Policies that are clearly laid down will

avoid accelerating coastal erosion rates and increase the climate change risks in adjacent properties. If the new envisaged EIA could address this concern, the project team might play a leading role to develop a coordinating mechanism at the national and local levels, including Rodrigues, to ensure an effective consideration of agency concerns.

Governance and accountability
MTE views that the governance and accountability geared to respond to the adaptation needs of the poorest and most vulnerable are weak, especially at the decentralized levels. Recommendations on best technical and institutional adaptation practices should also include these issues, bearing in mind that climate change cannot be the sole responsibility of any single institution or professional practice and that it is important to strengthen existing systems of governing, including those at the local level that can promote bottom-up effective adaptation.

The governing and accountability aspects need to be applicable to line ministries responsible for the provision of inputs in climate change management/adaptation. Policy-wise or hierarchy-wise, there seems to be a subordination/or a dependency relationship vis-a-vis MOFED that would warrant a behavioral shift in view of the pervasive nature of climate change, requiring the mainstreaming of adaptation into development and the incorporation of investment decision-making processes.

A clearing house
The clearing house concept is still under study. The project team is coming up with two options, either a climate change bill or a statutory committee on EIA that would respond to this output. As per the ProDoc, the proposed alternative is to develop a national coastal zone adaptation strategy which addresses all perceived climate change risks in the coastal zone over the next 20 years. Under the Africa Adaptation Programme, the national climate change adaptation policy framework has been developed, comprising a national climate change adaptation policy, a climate change adaptation strategy and action plan, and an initial three-year climate change adaptation investment plan. A draft Climate Change bill was also prepared but need negotiations within MoESD.

The new National CCA strategy was approved by Cabinet in 2013. The project related work on policy can reinforce these new related policy reform efforts. The project activities might focus on the overall enabling environment. The project team plan to review the document once it is approved to identify gaps therein. Together with the bill, it will constitute a basis for work by the project.

Policy advocacy
It is necessary to have advocacy designed to raise awareness of the importance of institutional arrangements for adaptation. The team observed an environment where adaptation can be a frontline policy issue for development. Perhaps it is beyond the scope of this project, but review of the current institutional arrangements for adaptation is needed. The MTE expresses the need to explore future options to strengthen such arrangements.

Integration of development plans
The prevention of loss of lives and assets could be a strong justification in advocacy for a policy response. It will support the strengthening of institutional and technical capacities and mainstreaming climate change adaptation and disaster risk management in policies, strategies, and plans. A mechanism, perhaps a sub-committee of the project's technical committee and MOFED, could be established for the purpose of integrating the climate change adaptation and disaster risk management and sustainable coastal

management (controlling and preventing coastal degradation) priorities in existing development plans, policies, and strategies.

At the decentralized level (districts and Rodrigues), local adaptation and disaster risk management plans will ensure that climate change issues (including adaptation and mitigation and coastal degradation) are integrated into the district-level plan (mandate of District Councils/RRA).

Policy needs to be defined to strengthen research and development linkages on climate change adaptation and disaster risk management. Such research will benefit policy formulation and adaptation. (Note: Political leaders, not only from government side, should be involved.)

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Outcome 5 - Knowledge Dissemination and Management Rating – Marginally Satisfactory

Outcome Target:
Baseline: *(2010) There is no consistent awareness nor understanding of the implications of climate change in the coastal zone; households, communities, and government organizations do not factor into their plans and activities the possible climate change effects 50 years from now.*

5.1 Handbook, training modules, and website content capturing best coastal adaptation practices for the Mauritius context.
5.2 Dissemination of lessons learned from the program with coastal stakeholders in other locations in the southern Indian Ocean.
5.3 Interpretive signs and small-scale models of coastal processes designed and installed at each site, explaining the science of climate change and coastal processes (in lay terms), so that the linkages between weather, stability of coastal features, and adaptation measures are clear.
5.4 Public awareness campaigns on climate change in the coastal zone designed and delivered, involving the Mauritian media (TV, radio, Internet).
5.5 Priority ranking of vulnerable coastal sites established, to guide the order of future investment by the Government of Mauritius and the private sector.

The project management unit's strategy for coordination and learning is to be a platform for knowledge sharing, information dissemination and learning. However, MTE believes there is still need in this project to develop a coherent and strong knowledge management strategy and design a system as platform for results in terms of policy advocacy and the need for longer term technical coordination, learning, and monitoring. Currently, these activities are focused on dissemination and are lacking the planning and strategic overview for leveraging knowledge products, methodologies and tools to influence policy and generate dialogues all levels about cost benefits, for ongoing monitoring and leaning that will influence implementation of the pilot strategies and scale up work. This area needs urgent full support to help the project team develop a high profile and functioning KM system for implementation. A good strategy for knowledge management for CCA DRR goes beyond knowledge dissemination. Although this project is doing excellent work to develop knowledge products, to be effective for the outcome it can augment the current approach by articulating a written strategy for dynamic learning and monitoring towards transformative change to a culture of climate change resilience. This aspect requires technical support.

To do this well, project management might restructure the staff at the PMU and designate a KM/ME/CB officer. Recruiting a short term consultant would also help design an excellent KM/ME/CB plan for future

implementation. Such short term input will build capacity of the ME officer for KM/ME/CB project oversight. The advisor on KM/CB/ME can be tasked to demonstrate a longer term KM system for CCA coastal zone in Mauritius and promote instituting such a position at project closure to continue as a sustainability measure and to reinforce CCACZ learning and cross sectoral collaboration. During project implementation, the project management unit can be an excellent learning platform for the systemic learning and cross sectoral coordination for climate change adaptation and EW. This is at the level of the CC impacts, researchers and for engagements with the site level communities. Furthermore, the knowledge management system can be designed to facilitate project implementation and working linkages of the various groups and committees set up by project to help facilitate involvement of the communities in project level decision making and work planning. This might involve the development of an appropriate web interface, communication system, knowledge portal and training for designated KM/CB/ME officer to responsible for facilitating linkages, and enabling online platforms(communities of interest) for various committees set up).

- **Remaining barriers to achieving the project objective**

The project strategy addresses the entire range of barriers to achieving the project objective. The most significant risk at this point is policy advocacy for co-financing when required and dealing with the procurement bottlenecks that are really slowing down implementation, it is important to garner important political will for broad based government and community ownership of the project's risk reduction and adaptation on coastal zone agenda which is cross sectoral in nature. The project team may wish to garner a political superstar to champion this project in the media and to ensure that steering committee member is involved this is linked to the community engagement strategy mentioned above and below.

4.3 Project Implementation and Adaptive Management - Rating - Satisfactory

- **Management Arrangements**

The project management and coordination arrangements were assessed based on the structures set up for oversight, decision making, and engagement. In this project, two key committees are set up, a cross sectoral steering committee and technical committee. The project themes are cross sectoral and will need mechanism for cross sectoral collaboration and decision making; it will be critical to actively engage representation of the relevant sectors and planning departments. An example is early warning, a cross-disciplinary area that involves a disaster risk planning and responders in addition to meteorological and MOI services. Another example is the mangrove and tree planting project, which includes non-invasive work, and thus required partnerships with forestry services and fisheries. The forestry service and the Ministry of Agro Industry and food security, Ministry of Fisheries have in fact been involved in the mangrove project since the project conception until the final completion. Village-level involvement can be garnered through committees or local planning schemes. Community level partnerships have been confirmed to been achieved through formal MoAs signed with the community of the grand sable fishermen's community and also the local women association. The project supported mangrove project was implemented based on a community based adaptation model.

The cross sectoral project steering committee have met 8 times and the innovative (also intended as cross sectoral) technical committee has in fact met 13. These committees are instrumental for providing technical input on work planning and other oversight functions of the PMU. Note that all the following stakeholders mentioned are already members of the PSC but MTE does, however, find room for enhancement of involvement of some sectors including: disaster risk reduction, tourism, finance and planning, watershed management, and agriculture management in the coastal zone. The requirement of a

private sector representative to participate in the steering committee should also be eventually set up to follow on the agreements stated in ProDoc (P84 ProDoc). Post MTE project team can ensure partners are engaged on the SC and play a role in site level demonstrations. The MTE observed opportunities for social corporate responsibility in the development of the Refuge Centre and for joint action planning and financing options at Mon Choisy and Rodrigues (Eco bus).

Project Management Team (PMT)
The project management team is constituted according to the project document with the exception of the technical advisor. This position has been substituted with a technical assistant (steering committee minutes). The program support role includes administration, management, and technical support to the program manager, as and when required. The current staffing arrangements and capacities held within the team include the project manager, one environmental technical assistant, a financial officer, and one intern on loan from the ministry of environment. In the absence of ongoing technical advisor, the project has been engaging experts for technical advisory services as needed including assistance from the JICA team from Japan (interview with PM).

According to the ProDoc, to run the program on a day-to-day basis on behalf of the implementing partner (Ministry of Environment and Sustainable Development), reporting to the Director of Environment, within the constraints laid down by the Project Board (described below), the Program Manager's prime responsibility is to ensure that the program produces the results specified in the program document to the required standard of quality and within the specified constraints of time and cost.

MTE observed a small effective and streamlined team (four persons) working in a dedicated office within MOESD. The project team is knowledgeable and committed to make the cross sectoral linkages to make this project work. The project manager's technical leadership and embedded in the MOESD hierarchy (recruited by MOESD) is indicative and good practice. (The PM is a coastal zone environmental engineer on loan from the beach authority). The PM is actively taking stock of learning from other countries through project sponsored study tours (recent UNDP/GWP regional training on CBA in Addis) and UNDP network and interpreting the project document for results (observation and interviews with team members). In this project, the steering committees and technical committees are important for PMU functioning and are thus being prepared and briefed by the project team. The technical committee membership might be reviewed to consider engaging other key stakeholders based on learning to date i.e., DRR, MID, MOF, Tourism and Education ministries.

Need for stronger PMU Link to sites for community decision making, planning and engagement
In terms of coastal zone climate adaptation management strategy, the community inputs can be more formally engaged and targeted for project level decision making and planning. Communities must be actively engaged for aspects of project governance and sustainability mechanism and in terms the scale up strategy that is to be recommended. A community based committee has been established at each of the project sites involving the village councillors, women associations and other residents. All the CBCs are active and have been crucial in the identification of site for setting up Refuge centre at Quatre Soeurs, relocation site at Rivière des Galets, and mangrove plantation at Grand Sable.

Project management has considered strengthening the site level community work by doing the following: 1. employing a paid local-level site coordinator for each site, i.e. a community facilitator to support the project's goal of resilience and to work more effectively in the three pilot communities. The community facilitator is a community leader or a local educated person; alternatively, the project is thinking about hiring local or international NGO or CBO organizations with a management structure to support work on

behalf of the project. The link is essential and has been proven in many other countries to work effectively by imparting trust of community/government services for the desired long term, economic, environmental, and social changes; 2. designing a community-level technical committee at each site and developing formal MOUs or conventions; and 3. positioning focal points at the project management unit for each site, including Rodrigues, to backstop the community-level engagements.

Procurement issues

The project implementation strategy has been to accomplish quality outputs through larger institutional contracts carrying out more than one input. The practice of larger procurements incorporate a key lesson incorporated based on implementation of the AAP program, which had resulted in slow implementation by procuring too many *small* inputs making project inefficient. In fact, the primary bottleneck for implementation has been slow national procurement (linked to under-budgeting or over-estimation of scope of work for outcome 1 and 2 resulting in cancellation of the two first public procurement exercises). The main reason in the delay of the procurement can be attributed to the fact that the original budgetary allocation (a project design stage) made for these project components were not based on market prices and did not cater for any cost escalation. This resulted in cancellation of first round of procurement on grounds that the best evaluated bid price shall not exceed the budgetary allocation by more than 15 %. (As per the procurement laws).

All outcomes are related to outcome one in terms of project scheduling and the overall strategy, including generation of scientific baselines gathered from the technical work in outcomes one and two. The procurement exercise resulted in long delays in implementation–18 months. As a consequence the project had a very low delivery at the time of the MTE.

The project delay situation

National Implementation Modality (NIM) projects must respect local procurement laws. Mauritius has a relatively new, dynamic procurement law (2006) which stipulates that major procurement (anything over 1 million rupees) as per law must engage in a transparent process, including delivering the expression of interest first. A short list is then developed by an independent evaluation panel. The RFP is then shared with the short listed firms, and the received bids are technically and financially assessed by another evaluation panel. If the technically responsive bids are in excess of 15% above the budget estimate worked out at the start of the exercise, the contract cannot be awarded and rebid is mandatory (re-starting from EOI stage).

The ToR was finalized before posting of EOI and once posted, it took six months for a technical agreement by technical and steering committees. The RFP development process takes an average of six months, including at least one month for firms to bid. The procurement process went as follows: the project inception meeting was held in September 2012 and the overall work schedule and plan for project implementation was agreed upon. The ToR for outcome one, according to the PM (interviewed in Port Louis on Oct 26, 2014), was perceived as a priority, and so it was developed fairly quickly. The RFP for outcome one was advertised in October 2012 and by early 2013 a short list of nine firms was available. The project team received nine viable bids, all of which then went through a technical evaluation as per procurement rules. Two bids were considered technically responsive but both of them were higher than the budget estimates by more than 15%. For outcome one, bids received were 275% higher, for; outcome 2, they were 400% higher than what was expected or budgeted (interview PM). The lengthy 2-step process coupled with budget problem led to the delay in implementation.

The project team had no choice but to go for a rebid for both outcome 1 and 2. The ToRs were reduced on the timing (duration/man-month inputs) but without compromising the outcomes as per AF approved ProDoc. The scope of work which was really ambitious, was adjusted to be more realistic.

During this period the project team also entered into a process of reallocating the budget (supported by UNDP and in consultation with the AFB). In January 2014, AFB agreed to a reallocation and time extension until July 2018.. The budget was amended for outcomes one and two (in which activities require investments in works and infrastructure) and outcome four (policy) and five (KM), which were reduced. The rationale was that for outcome four (institutional and policy complement) related work had already been done in the context of the AAP project (NDRR plan to be further built upon (For more analysis on this aspect, see the section on policy).

The rebid for outcome 1 was done by UNDP upon request of MOESD and approval of NDA and AFB. In-depth reworking on the RFP document with support from UNDP regional office took some time, but the quality of the outcome of the procurement process and clarity of ToR and resulting contract has benefited from it. For outcome 2 the rebid was done by MOESD with support from the MET Services to source suitable consultants.

The diligent and lengthy procurement exercise did lead to two high-quality bids being awarded.
The exercise highlighted key lessons including the following:

1. The project original budget allocation did not reflect the actual market for projected services;
2. The actual timeline for procurement is lengthy;
3. The PMU team creativity to beat the timing issue by going through the UNDP's procurement system (a decision discussed in the steering committee meetings) also took a long time. The team will adhere to national procurement for the rest of the project and only on an exceptional basis use UNDPs as the lesson is that the process can be just as lengthy[x];

MTE evaluators find no cause for worry concerning the low delivery to date since the project team is focused on quality inputs. MTE also recorded a solid implementation strategy described throughout this report. The two largest of the project's projects have key contracts on track to deliver as both were awarded in 2014.

P*roblem solving*

Normally, the following steps are required to procure projects using government processes over a certain cost threshold, there is the initial development of a short list, the EOI and the RFP. One issue that was raised was a perverse incentive for staff to participate in project related procurement meetings. A government circular stipulates that *works on procurement can only be done after working hours,* and *t*here is also *payment for participation on RFP panels, and after hours work is considered overtime (*interviews with key project stakeholders). This makes it difficult to plan meetings. On November 19, 2014, MTE visited the procurement policy office and the process and incentives were discussed, including the steps it takes. It takes 30 days for document preparation and work with the central procurement board, from invitation to submission of the bid. The process comprises preparing and finalizing the documents, inviting to bid, allowing 21 days for review, and 45 days for agreements--roughly three months.

There are tracks for procurement in normal and emergency times. Emergency conditions can apply if the project can be demonstrated to be an emergency procurement (section 21, public procurement act). The

project team might choose to present a justification to fast track for this project as it is related to financial risks (high cost of works in the scale up phase), emergency and issues pertaining to national security. There can also be exceptions to the rule under sub-sector 3 for any provision of this act in terms of conflicts with the donor. UNDP procurement rules can prevail if it is deemed necessary.

Three options are suggested:

1. Justify the emergency fast track for procurements in this project, continue with government procedures, and correct any perverse incentive. Request PS for agreement that staff can work on project activities during work hours.

2. Ask UNDP to support overcome this bottleneck by continuing to do recruitments of individual consultants, receiving added value as per cost recovery mechanism. UNDP will not be able to handle infrastructure procurement. This risk for future AF funding is being flagged now.

3. Hire a short term assistant at PMU to help with preparing procurement documents and following up on the process especially when the construction and works begin. Note that this action has already been made part of the deliverables in the two major consultancy contracts, i.e. preparation of the bid documents.

- **Work planning**

Work planning is done on time. Project has regularly annual work plan and based on the annual plan, PMU does quarterly's submitted with planned budget to steering committee for approvals. Coordination of inputs and identification of synergies in ongoing activities and for linking to the national DRR and CC plans. These are key for good work planning, for project implementation and also for consideration of sustainability. Evaluation team learned that this project is a part of a larger plan (meeting with climate change unit Friday Nov 21) on climate related disaster risk reduction and that in developing the CCA in coastal zone strategy for best use of AF funds the following studies/reports/activities were considered, among others:

1. Africa Adaptation Program (AAP) on Climate Change in Mauritius;
2. Japan International Cooperation Agency (JICA) technical assistance on "Capacity Development on Coastal Protection and Rehabilitation in the Republic of Mauritius";
3. Baird's report on coastal erosion.

õ **Finance and co-finance Rating – Marginally Satisfactory**

Based on what is an ideal result for climate resilient coastal zone adaptation at site level, this project team launched two major procurements for the implementation of outcome one and outcome two. The delays related to the procurement have already been discussed in depth above. The process of bidding for holistic work on CCA at site and for Early Warning system for storm surge have presented learning experiences and insight as to the projection of the scope and cost of site level rehabilitation and adaptation work. It has also presented excellent learning around the cost associated with setting up of an early warning system for flood. The two major procurement exercises tested the global markets for this type of work and this has help team understand the relative costs ousts and were a good benchmark for planning these projects in the future.

Cost effectiveness

The cost effectiveness of this project is judged based on the delivery, performance, and results recorded to date. A common theme (Project Document p 23) is the aim to develop practical experience with coastal adaptation measures to ensure that all vulnerable coastal sites and communities in ROM (all islands) can be made climate resilient over the next 10-20 years. The proposed project is thus considered a **key catalytic investment**, to set the course of action in the right direction.[xi] Henceforth, there is a certain urgency for results held within to deliver on a demonstration of a methodology for scaling up to all other vulnerable coastal zones of Mauritius as soon as possible and putting into place preparedness, including a reliable early warning system for storm surge including swell and wind effects on storm surge. By mid-term one would expect 50% delivery however, to date delivery stands at 6%.[xii] The project team and UNDP have foreseen this issue and sought a 1-year extension, which has been and granted, i.e. the MTE is therefore not conducted at midterm but 2.5 years into a 6-year project in reality. The procurement bottlenecks and processes for payment approvals are already discussed above. The movement of funds for major work procurements in outcome one and two means that the project team must work strategically and in partnership (including with government co-financing considerations) to ensure financing and synergies between outcomes. To be more strategic in this regard, KM system for KM/ME/CB knowledge sharing be developed (Also see ME and KM sections).

C0-Financial Reporting

A key recommendation is that the government co-financing in particular for office support, human resources, and "works" at site level be recorded in an easy to use monitoring and report system for purposes of AFB/UNDP at end evaluation. An indicative figure on government co-financing is summed up as follows:

Buildings-
Staff-
Facilities and office space–
Equipment-
Transport-

AF projects and adaptive management.

The project budget was difficult to reschedule. This is a disincentive for adaptive management. The procedure should be flexible to enable adaptive management of the budget in addition to planning actions. In this project, the projected budget was uncertain as the project action would be dependent on feasibility studies to be carried out, I.e. early warning system. The project budget for infrastructure works was relatively small for hard options concerning infrastructure. Assessments might be a limitation to the optimal actions of what can be done. Co-financing might be needed from Government or private partners at some point. That said, it is promoting cost-effectiveness in design of interventions whether social considerations, ecological or infrastructure related costs. The MTE takes note of the contribution of the government of Mauritius for the land acquisition to the tune of 340,000 USD for the construction of the Refuge Centre which have been significant inputs and indicators of government commitment.

TABLE 1 CO FINANCING TABLE

Outcome	Initial/planned allocation	Revised Budget Allocation (AFB) May 2014	Expenditures to July 2014 (USD)	Percentage expenditure	
				Of the Proposed Financing amount	Of the Disbursed amount
1	6,465,700	6,680,440	128,972	1.9 %	23%
2	133,705	310,365	38,173	12.3 %	6.7%
3	394,025	394,025	142,397117	36.1 %	25.3%
4	350,050	200,000	-	-	
5	561,350	320,000	20,578	6.4 %	3.6%
Total-Project Implementation Cost	7,904,830	7,904,830			
Execution Cost	500,000	500,000	174,,101	34.8 %	31%
Total Program Cost	8,404,830	8,404,830	**504,222**		**6 89.66 %4.2%**

ITEM / ACTIVITY / ACTION	AMOUNT (USD)			
	2012	2013	2014	TOTAL
Output 1.1, 1.2, 1.4, 1.5, 1.6	28340	40894	59,738	128,972
Output 1.3				
Output 2.1, 2.2	8756	2131	27,286	38,173
Output 3.1, 3.2, 3.3	0	71093	71,304	142,397
Output 4.2, 4.2, 4.3, 4.4				
Output 5.1, 5.2, 5.3, 5.4, 5.5	0	0	20,578	20,578
Execution Costs	19780	65070	87,251	174,101
TOTAL	56,876	179,188	184,850	**504,222**

Output Targets	**Expenditure**
1.1 Detailed technical assessment of each site, with chronology of previous flood and erosion events and collection of near shore oceanographic data, during "quiet" periods and "active" periods (one month each) to inform the design of the technical interventions at each of the three sites. 1.2 Technical design of coastal protection measures at each of three sites, with detailed costing, carried out in a gender sensitive way. 1.3 Successful construction of physical interventions at each of the three sites.	**Output: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6** **USD 128,972**

Output Targets	**Expenditure**
1.4 Analysis of data and development of recommendations on how the interventions can be adjusted for other vulnerable coastal locations in ROM 1.5 Monitoring program designed to include scoping of suitable parameters, including beach width and slope; depth of adjacent lagoon sediments; wave height, period, and run-up; direction of near shore currents, etc. 1.6 A targeted coastal process/weather event monitoring system in place.	
2.1 Assessment of the current sea state monitoring systems (Mauritius Meteorological Services and Mauritius Oceanography Institute) and definition of required critical parameters and operational requirements for an early warning system 2.2 The early warning system installed and implemented (with links to early warning system for cyclones), with communication linkages established from level of National Coast Guard at Headquarters down to the level of coastal communities.	**Output: 2.1, 2.2** **USD 38,173**
3.1 "Handbook on Coastal Adaptation" packaged as training modules for coastal communities, relevant Government agencies, and private sector stakeholders (such as hotel operators); training sessions delivered on a regular basis over the course of the project (at least twice annually). 3.2 Short course on Coastal Engineering designed and delivered (twice during program period). 3.3 Specialized course on Cost-Benefit Analysis of coastal adaptation measures designed and delivered (annually, over four years).	**Output: 3.1, 3.2, 3.3** **USD: 142,397**
4.1 A National Coastal Zone Adaptation that addresses all perceived climate change risks in the coastal zone of ROM over at least the next 20 years, with recommendations for supporting policies and regulations 4.2 A set of recommendations on best technical and institutional adaptation practices suitable for the coastal zone of ROM 4.3 Definition of the required structure and processes for one "clearinghouse" for climate change oversight in the coastal zone of ROM (a unit or institution, or collection of individuals from various agencies which is able to make final decisions on the climate appropriateness of future development projects; also having a follow-up enforcement capacity) 4.4 Recommendations for new economic instruments	**Output: 4.1, 4.2, 4.3, 4.4**
5.1 Handbook, training modules, and website content capturing best coastal adaptation practices for the Mauritius context 5.2 Dissemination of lessons learned from the program with coastal stakeholders in other locations in the southern Indian Ocean 5.3 Interpretive signs and small-scale models of coastal processes designed and installed at each site, explaining the science of climate change and coastal processes (in lay terms), so that the linkages between weather, stability of coastal features, and adaptation measures are clear. 5.4 Public awareness campaigns on climate change in the coastal zone designed and delivered, involving the Mauritian media (TV, radio, Internet) 5.5 Priority ranking of vulnerable coastal sites established, to guide the order of future investment by the Government of Mauritius and the private sector.	**USD 20,578**
EXECUTION COSTS	USD: 174,101
TOTAL	USD: 504,222

- **Project-level monitoring and evaluation systems**

Program monitoring and evaluation (M&E) is conducted by the Program Team and the UNDP Country Office according to established UNDP procedures and as stipulated the project document (ProDoc, page 51). The ProDoc results framework defines the performance indicators for program implementation at the output and outcome levels. In terms of monitoring for results, however, this requires both technical- and project-level monitoring. MTE finds that M&E is essential for this project to ensure coherence in outcome-level strategies for results across four sites (including Rodrigues) and needed for design and monitoring of outputs against the project plan toward the overall development results.

The key reference document prepared and shared to formalize various agreements and plans decided on during the project inception meeting was the inception workshop report. This workshop was set up to address a number of project start-related issues, including agreement on the project results framework, a

finalization of the first annual work plan; and a review and agreement on the indicators, targets, and their means of verification, with a recheck of plus rechecking assumptions and risks. Included was a detailed overview of reporting, monitoring, and evaluation (M&E) requirements. The M&E work plan and budget was agreed on and scheduled.

In fact, the project team is following the project document closely, which is what the AF requires (Interview with PO at UNDP). The PM is acting as a dedicated M&E officer overseeing the timelines and monitoring exercises. This management and implementation structure might even become more strategic and activated with a dedicated person and written site level strategy and monitoring plan with cross sectoral smarter indicators (see annex suggested indicators developed at MTE). Monitoring must also present in its strategy for sustainability and capacity development.

ME for results issues
CCA projects in the coastal zone require adaptive management approach based on good design, including a scientific baseline (and indicators) in the areas of economic, environmental, and social expected outcome. To date, baseline values and indicators covering the three dimensions of CCACZ still need to be established in all sites, including Rodrigues, to be effective. This is to consider in situ barriers for adaptive management and participatory coastal zone management and monitoring. The current project management is, in fact, considering the results from this perspective, including the situation of design from economic, social, and ecological solutions. However, they are restricted by a rigid project document. Adaptive management should be considered as an important aspect towards project's success. Procedures for adaptive management and budget revision need to be enabled in line with this principle. AFB projects might adapt similar regulation to GEF projects, which are currently different. MTE learned that the adaptation fund secretariat does not have monitoring guidance in place to date and has a different implementation modality than the GEF projects (more depended on host government to develop this) and it is also very strict on changes in the original log frame and budgets. The original log frame determined at project design stage is thus the primary management tool and lacks a built in monitoring mechanism for course correction.

As the project implementation precedes progresses, the need is for strategic focus on M&E to determine whether the changes at the three sites (we add also Rodrigues-which is not a formal project site but has become a focus for results in the other three and for overall development objectives) operate with specific monitoring plans toward results and toward the overall capacity development and policy learning objectives. Currently, the ProDoc is the principle monitoring and learning tool, it is not contextualized sufficiently for site-specific results that consider the economic, environmental, and political shifts required for implementation towards results and sustainability, both in adaptation and capacity building re long-term objectives; (see catalytic funding) must be targeted). Team can target key change interlockers with short, medium, and longer terms views. The MTE recommends appointing a project staff member such as the Technical Assistant recruited in September 2014 as focal point to support more strategic monitoring and results considering, taking into consideration that each site is special and will require a site M&E plan. Key recommendation is to institute a ***focal point in PMU*** for the ***development of a project-level M&E strategy that complements the project document log frame***. The site monitoring plans should link to KM and the overall CB strategy against the capacity development learning outcomes (also to be determined; see section on capacity development).

- **Partnership and Stakeholder engagements**

The project has excellent relations with other institutions and is being implemented through a partnership and collaborative approach. This is satisfactory. Partnerships are also elaborated upon in the context of the outcome analysis (above). Finally, excellent new and innovative government partnerships are developed with key NGOs and CBOs several of which are highlighted below. The partnership strategy is not a written document however the work is evident by the partners who are engaged and even co-financing related projects.

MTE find that many formal partnership protocols have been signed in line with expectations for implementation (ProDoc). The project team has spent considerable efforts in developing constructive working partnerships (involved in project oversight, inter sectorial technical committees, and those active in support of site-level implementation). Formal MoUs, the chosen protocol for partnerships have been signed with UoM, Met Services, NGOs including the fishermen's and the women's associations and Reef Conservation. Other engagements were evident and are observed by MTE with the University of Mauritius, the Metrological Service, the Marine Oceanographic Institute, Ministry of Environment and Sustainable Development, Ministry of Finance and Economic Development, Ministry of Housing and Lands, Ministry of Fisheries and Rodrigues, Ministry of Public Infrastructure, Beach Authority, Ministry of Tourism and Leisure, Ministry of Local Government and Outer Islands, District Councils, Mauritius Oceanography Institute, Mauritius Meteorological Services, University of Mauritius, and relevant NGOs/CBOs (see below), including Reef Conservation and Shoal (Rodrigues). This should continue. The work is also linked to strategic KM and the need to develop a ***practical user friendly knowledge sharing and learning platform*** for such collaborations and new partnerships to continue to work together. Moving on this aspect will require planning and investments and so budget and or co-financing need to be re thought as most of this project's budget is earmarked for works and EW system.

UNDP

UNDP is supporting national implementation, meaning that the government is responsible for the implementation and strengthens its capacity managing and overseeing at the international standard in the process. NEX modality maximizes local learning. It is an excellent approach well suited to the Mauritian context and also builds capacity for environmental protection and natural resource management.

Government stakeholders value working with UNDP, and there is a demand for UNDP services in Mauritius. UNDP has played effective catalytic and facilitating role in developing the original idea, in resourcing, and in strategic management of the project. The context for execution of the project was special, as it is one of the first AFB programs implemented in Mauritius. As national counterparts are becoming faced with implementing using its own capacities, rules, and procedures related to procuring, monitoring, evaluation, and financial reporting, UNDP is playing a backstopping role and still need a supportive role. UNDP's experience in execution generally, GEF mechanisms, and NEX modalities have been crucial in assisting the project implementation process unaccustomed to AFB modalities. UNDP management structures and working methods are appropriate and are helping in achieving the outcomes. For example, UNDP is providing platforms for south-south cooperation and for project based learning.

The UNDP approach to capacity strengthening places responsibility for implementing projects with the respective government partner. In this case, UNDP's methods are flexible with *risk management as the guiding principle as opposed to being risk adverse*. Mauritius needs this type of support. The ability of UNDP to be a risk taker and present itself as a responsive, objective outside partner is critical for a project that is cross-sectoral and as a multi-stakeholder initiative with many potential colliding interests. This was

evident in the two exercises on procurement. It is also important that in a country context such as Mauritius, where there is a limited number of professionals with the relevant environmental expertise and experience, some projects will be staffed by people from outside of government; others are staffed by people on leave from government. UNDP plays an important role in identifying expertise for this project and through its global network is able to mobilize important visibility for the work. In one case, for example, the project team facilitated global visibility by preparing for the nomination of the mangrove project. It won the Samoa Bright Spot award with support of GEF/SGP. The partnership is thus productive, positively contributing to achievements of outcome related to climate change adaptation through a learning while doing process. UNDP's national execution approach is thus well suited for Mauritius's development situation.

Meteorological Services

Meteorological Services is responsible for Early Warning System of the hydro-meteorological hazards, and partially for education and public awareness. The Mauritius Meteorological Services maintains a 24/7 watch for all hazards likely to affect Mauritius, but at present this system is for cyclones only. Meteorological Services has a cyclone warning system and an ongoing outreach (public awareness) and education program, but the system in place, is not well understood by all, especially tourists/expatriates. Relevant information on tropical cyclones, heavy rainfall, land slide, tsunami, high waves, and strong winds are readily available, but not really in place for outcomes desired by this project. Meteorological Services is ideal as lead counterpart as it already has as a good early warning communication system in place done with the collaboration of the Mauritius Broadcasting Corporation, the private radios, the Mauritius Police Force, the Internet, Meteorological Services website, or by personally calling at the Meteorological Services. Henceforth, the effectiveness of early warning systems for tropical cyclones is generally well established and a torrential rain warning system existed since the mid-eighties. A landslide warning system is also currently operational. A tsunami alert system has been developed and is also already operational. High waves warning and strong wind warnings also exist and is now operational.

Mauritius is a member of the RA I Tropical Cyclone Committee. The Regional Specialized Meteorological Centre, (RSMC), is Meteo France, Reunion, and Mauritius is the sub-regional centre. The Tropical Cyclone Committee meets every two years around the month of October and there is good cooperation among member countries in sharing data and information. There is also good working relation with other WMO member countries, the Pacific Tsunami Warning Centre, (PTWC) and the Japan Meteorological Agency, (JMA), INCOIS (India), and the United States Geological Survey, (USGS), on earthquake warning.

National Platform for Disaster Management DRRMC

The DRRMC is the national platform for disaster management. The Disaster Risk Reduction and Management Centre is now operating under the purview of the **Ministry of Environment, Sustainable Development, Disaster and Beach Management** (new appellation of the Ministry since December 2014). It coordinates activities in the event of an emergency or crisis at national level, set up under the Prime Minister's Office to oversee disaster and risks related preparedness programs. Whenever a disaster is likely to strike the island, the Special Mobile Force, the Mauritius Police Force, and the Fire Services are mobilized as per their Emergency Operations Plan. The centre ensures close monitoring and relevant actions when and where necessary will be effective. With the creation of a Disaster Management Centre, a central disaster data base is to be created, including both natural and man-made disasters. At the moment most disaster data are located at different ministries and department. The Centre has been tasked to do multi-risk assessment. In view of its position in the organizational structure of government, the Centre is not positioned to provide effective coordination in DR and lead interventions that cut across sectors and that involve other line ministries.

Key CBOs developed and or supported by project

Grand Sable Fishermen Association (GSFA) Mangrove Project, Quatre Soeurs site level

A Memorandum of Agreement was signed between the Grand Sable Fishermen Association and the Ministry of Environment and Sustainable Development for 20,000 mangrove seedlings that were planted in the lagoon areas of Grand Sable, Petit Sable, and Quatre Soeurs by the Grand Sable Fishermen Association (GSFA), which comprises 51 members (fishers). Key partners involved in the mangrove planting project implementation included UNDP country office, UNDP GEF/SGP, AS Aid, National Coast Guard, Ministry of Fisheries, Ministry of Housing and Lands, MoESD, Forestry Services, and local authorities. The fisher community earned an alternative livelihood during the project period, especially during the low catch period. The mangrove plants were reported to have reached a height in the range of 45 to 65 cm after one year's time. The surveillance is being ensured by the National Coast Guard and Fisheries Protection Services. Currently the maintenance program is being sustained. Five payments of USD 7,000 were disbursed to GSFA (in line with the Memorandum of Agreement). The project learning has been that implementation of the project with involvement of the community enhances local community ownership and acceptability.

In Quatre Soeurs, the approach to restoration of the mangrove output had originally proved futile (prior to the AF project) without proper consultation of community members, who unadvisedly pulled up the MoESD mangrove plants. When the project manager explored what was happening, he found that the fishermen were not aware of the importance, so he shifted the approach. PM made an excellent move to develop a revitalized fishermen's association for planting the mangroves, and this worked. When the fishermen were gainfully engaged in a contract to plant and care for mangroves, the education and sensitization process was part of creating and imparting value. Since this has been working, over 20,000 plants have been planted. MTE observed these plants and consulted with the head of the fishermen's association. MTE feel that this organization and partnership is a key for CCACZ demonstration, and this type of ***resources user organization*** that can be replicated in all project sites in one form or another.

Grand Sable Women Planters Farmers Entrepreneur Association (GSWPFEA)

In addition, the project team had cooperated with a GEF/SGP project in a women's NRM economic development group for imparting public sensitization and environmental education. The MTE finds this aspect of the project strategy in particular a good practice as it demonstrates that by empowering women to be champions by engaging them in productive activities is strategic for imparting value of the resources to local user groups as per their day-to-day livelihoods. This project was also awarded the islands' bright spot award in 2014 in Samoa. In this case, the women were trained to train and engage in important community-level sensitization, which was the importance of mangrove to disaster risk reduction and livelihoods. This changed attitudes and practices related to mangrove destruction and engaged stewardship over mangrove plantations. The MTE believes the investment in women's business is worthwhile, and the project should endure more investment over and above the training to order 800 bags and help link the women to market mangrove products and crafts. This is a way for them to see that their business model is fully developed for mangrove-branded products and linkages to private sector are engaged. Women, in fact, were provided with two sewing machines and small seed funding. The woman are found also to be cultivating an interesting sea grass, a natural storm buffer called veliger, which might be cultivated for market and for use at the project sites. The project should continue investing in this women's ecological support organization in three ways 1) support to help them launch and develop a sustainable financing model for their products featuring mangroves, 2). support to develop a sea grass

nursery for inclusion into other sites 3) and support to do capacity building work with communities around ecological solutions as CCACZ champions.

3. Reporting and Communications Rating -Satisfactory

Good reporting and communication are absolutely key for instilling greater visibility and brand on this project for results and policy advocacy in line with the CCACZ learning objectives for communities, national level partners and internationally. In this, the work with local NGOs for capacity building, the local and international media and news is commendable. The project team with UNP support is doing good to attract *international visibility and attention*. For example, the *Mangrove* Project was a winner of the Island Bright Spot Award 2013 as part of the Global Island Partnership 2013 Solution. It was identified from a pool of 37 countries and showcased by Mrs. G.F. Aristide, President of GSWPFEA (The women's NGO partner of project-see above) at the 3rd UN International Conference on Small Island Developing States held from 1-4 September 2014 in Apia, Samoa. In fact, the mangrove project was showcased at the UNDP as a top story on 2014 World Environment Day 05 June 2014. It highlighted the ecosystem based adaptation using the community based approach. It was also covered by CNN during an "Inside Africa" piece on Mauritius".

For a policy and general public learning-oriented project, excellence in communications is key. The project team has a communication plan, and the results for the first two year have been commendable. For media, the following has been achieved: As part of the awareness campaign and information dissemination, the mangrove plantation project was captured by the Mauritius Broadcasting Corporation (MBC). TV reportage was mounted to demonstrate the local community's involvement and commitment in protecting their coastal environment while at the same time preserving their livelihood. The reportage was broadcast on the television news bulletin. For sustainability and capacity building of the coastal communities sensitization campaigns at the project sites are being undertaken under Outcome 3 by Reef Conservation (NGO).

The project team has confirmed that this aspect of the project is very important and will scale up work on CCACZ and CCDRR branding, using the logo that has been designed for mangrove as a tool. The project might consider having political champions for his project in line with its internal and external policy advocacy objectives as mentioned earlier.

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5. **SUSTAINABILITY *Rating - Medium Likely***

For a catalytic pilot project with seed funding, this project's sustainability is dependent on the having all stakeholders involved in implementation. This is in order to achieve the results for and successful demonstration, capacity development for ongoing in-county monitoring, and collaboration. For optimal policy advocacy and for scale-up, the technical steering committee membership and work can be highlighted and reviewed for more active participation and visibility. For example, the Ministry of Finance has Finance has expressed an interest in project results due to future financial and cost implications of the adaptation options. In addition, the project has synergies with the work that MID is doing on national accounting. These and other government departments can be encouraged to be more actively engaged and learn the project approach and key messages for development work. PMU can focus on facilitation of policy learning around the cost of the future investment. A handbook on cost benefits is planned, and this

will help design makers undertake the risk of no action, the cost of future investment. A good policy and public communications strategy should be written down and implemented to ensure that the work is understood and the costs are clearly articulated to the public and the policy makers.

Financial sustainability will depend on resource mobilization, project delivery, and partnership strategy. Although a resource mobilization strategy for the environmental field is clearly evident in the work under the two outcomes, the evaluators have not seen any written document on it. This strategy can be described as being built around a solid core of AF funding, using that funding to leverage additional funds from government co-funding or from other donor programs.

Institutional capacity, in the form of systems, structures, staff, and expertise, is also critical to sustainability of benefits from AFB/UNDP's contributions. The synergies forged and the relationships built and mainstreamed such that they emphasize strengthening policy and regulatory frameworks as well as institutional capacity to support the continuation of the demonstration benefits are all key elements of sustainability.

6. CONCLUSIONS AND LESSON LEARNED

Outcome 1

Learning based on the review of outcome one have been many, but certainly the theme emerging across the project demonstration sites is the need for holistic and results based management approach to CCA problem analysis and that solutions are needed including for Rodrigues. The information being collected on the state of the environmental content, including the social and economic aspects should also be linked to an overall project and government environmental monitoring system. Secondly, that partnerships and government input can be rationalized within the context be around community resilience is an overall project outcome. This outcome will require more comprehensive indicators defining what constitutes success.

Several lessons have emerged on the land *acquisition experience* at Rivière de Galets, which can be further explored and developed to feed into the broader policy development work. A key lesson is the need for a comprehensive and holistic approach to solving the coastal zone management problem as a requirement. With resilience as the outcome, a comprehensive package of interventions can be designed and promoted, based on the interdisciplinary scientific inquiry and detailing the barriers across three areas, including social, economic, and environmental considerations at each site, including Rodrigues. Furthermore, in terms of project management, a key learning has been that the procurement package for the baseline and feasibility study for the cost-effective option for resilience should consistently include a social scientist on the team. The study did engage a coastal engineer, and an environmental economist. For the future, any holistic team approach to CCA problem solving must reinforce the need for a social scientist.

CBA (cost benefit analysis) is noted as a flagship that adds value as the CCA problem-solving approach at each site including Rodrigues. The approach should become the brand of the project's policy change objectives.

An entry point for rallying the communities into planning for coastal zone adaptation is the work on infrastructure retrofit or design (i.e. new community cyclone shelter); however, the key to resilience is

affecting a cross-sectoral national, regional, land local planning approach. Each site should have a planning process begun around the district outline schemes. These participatory plans must take into consideration the work done by consultants at site level. In addition, whether the entry point is an early warning shelter or a sea wall or sea bed reinforcement, the idea of a long-term systematic solution for planning CBA must be factored in. Each site should have some element of a socio-economic solution to be an effective demonstration.

Instituting a longer term monitoring system for climate change adaptation in coastal zones is critical for sustainability. Sustainability must be considered during the design stage. Undertaking base line study of national level environmental monitoring is tied into this work and the lack of a system is noted as a serious environmental institutional capacity gap.[xiii].

Regarding a dynamic learning-based approach for CCA at the sites, the focus on capacity development and learning for CCA outcomes has been excellent. The engagement into an MOU with the University of Mauritius is strategic and a good lesson learned. The discussions with beneficiaries of the courses are insightful as to their knowledge on climate change and infrastructure in coastal zone issues. The wide range of inputs into the education system is also noteworthy. Formal and informal education is undertaken through eco business, university of Mauritius master degrees, and a short course on CBA. Attention to dynamic learning thus can be regarded as a systematic approach. The plans to develop a resource centre can be a future focus of continued collaboration with UOM in order to create a learning system for CCA and to develop scientific monitoring plan in partnership with relevant government departments. Generally, coastal zone monitoring should feed into a GIS system for continued enforcing and policy-making Monitoring through GIS system is found to be already operational at the Ministry (under the JICA project).

Work on NRM involving communities in design and implementation is noted for excellent interventions and for piloting the best case ecological based NRM solution. However, for best results a community-based approach to the initiatives is needed. This is both in terms of planning and implementation. In one community, for example, the residents pulled up the mangroves planted by project team, and it was working though village leaders that has enabled success. The principle for engaging with these communities should a key part of the future scale up strategy, and more resources applied to strategically engaging communities in planning interventions in their communities through end of this project. Two ideas came to mind at Mid-Term: 1. engage women further on productive products for livelihoods around coastal zone projects, 2 support scale up of project activities in other sites through outlining the scheme of green planning. The education component supports these aims, but management committees and village leadership need to be more systemically engaged. In other countries' pilots, sites have site coordinators or community-based facilitators who are employed by the project. This works to gain trust.

As part of the comprehensive package of interventions towards resilience in each village, the project team has been working with women's groups to create bags with a mangrove logo for marketing. This initiative serves two purposes. It advertises the project with the bag, and it is empowering women as village leaders for strategic advocating around protecting and stewarding their mangroves and CCA infrastructure management. MTE noted the women do need further PROJECT support to develop their products and take them to viable markets or to bridge them with the private sector. Thanks to GEF/SGP support they are developing plants that can be used in the project, for example, sea-resistant grass that can also be planted and transplanted in project sites. This project is a win-win! (In this project there has been excellence collaboration initiated with GEF Small Grants Programme in this endeavour and this should

continue in all sites .SGP has excellent comparative knowledge on community level natural resource management that is of considerable value to this projects goals.

Outcome 2

Key learning has emerged related to the costs and other key aspects of project work to initiate the development of an early warning system for coastal zone flood management. For this area, the objective is to develop a deterministic model for the best forecasting of storm surge. In this regard, the wave rider buoys (two of which are already deployed) serve support for ground truthing so the more buoys that can be in place, the more the information gathered will increase the reliability of the system being designed. In this case, coordination is a key aspect. For example, many local agencies are already working on parts. For example, the MET service is leading JICA, which is developing a DOPLEAR forecast system while the disaster management team has responsibility for aspects. To maximize optimal cost implications, the project team might develop a short term, medium term, and longer term strategy. The short term system that is the focus can be extended and upgraded to support flash flood and tidal surge forecast in future extensions and upgrades of the current system being put in place. The lesson for EW flood system development is the better quality the data, the more likely success.

Outcome 3

To ensure that a capacity building outcome is achieved, it is essential to link training activities with institutions benefiting from such activities. Absence of any reference to the integration of capacity building activities in the ongoing or future capacity development plan of concerned institutions indicates that capacity building activities have benefited individuals in an isolated and individual manner. That said, this project team is successfully imparting relevant trainings to the relevant ministries and institutions (including local authorities, beach authority, etc. according to the identification of the beneficiaries by the CEOs of those institutions. Active participation of individuals at the decentralized levels, district and village councils, and community sites makes implementation of program activities more effective, e.g. fishermen for mangroves. In addition MTE concludes that the coordination mechanisms for such are only going to be effective when they are strategically integrated into the local organizational and administrative culture and positioned in decentralized systems. The networking links established between UoM and foreign institutions knowledgeable in the subject area have made it possible for the project to benefit from expertise not available locally. The MoUs are documents witnessing the engagement of the partners yet are time bound, and this raises the issue of sustainability.

Consultative workshops and steering committee meetings have contributed to the establishment of key partnerships with private sector and NGO/CSOs. Effective climate change adaptation will require long-term planning approaches at the national and local levels. The project is in fact, designed with a climate change impact projected at 2060. This includes modeling of possible scenarios at design stage of the adaptation options for cc impact over the next 50 yrs.

Outcome 4 – Policy Mainstreaming and Institutional Development

The authority and acceptance of a line ministry to lead interventions that cut across sectors and involve other line ministries affects the implementation of the project (especially if it has low priority in the administrative hierarchy) because its success is heavily dependent on the performance of other line ministries. Since these line ministries are not directly accountable for the project's performance, they may not demonstrate the highest level of engagement.

Presently, as the project is perceived as a stand-alone initiative. Although located at MoESD, it has no authority for leading a coordination structure for adaptation interventions. A strengthened institutional framework will assist in enhancing coordination with other agencies.

Monitoring and evaluation of complex policies and national systems requires strong coordination across sectors and levels.

Effective and coherent support of adaptation planning and implementation is enhanced if institutional arrangements ensure a focused investment or production of data/information that enables stakeholders to optimize strategies.

Outcome 5 – Knowledge Management Capacity Development and ME

KM goes beyond development of knowledge products and dissemination. KM is a modality for project implementation and can support sustainability of CCACZ projects by putting in place a new and practical mechanism for cross sector coordination and dynamic CCACZ learning after project closes. It is a worthwhile investment to do it right.

7. RECOMMENDATIONS

Suggested actions for the design, implementation, monitoring, and evaluation of the project

1. Design and Monitoring for Results

→ *Recommendation: large scope–To overcome the project's ambitious design, large scope, and limited funding and to achieve project results, this projects team must focus on monitoring for results by instituting a designated strategic level ME officer in the PMU to support day-to-day monitoring to develop plans and strategies, including site-level links to the capacity development plan. For policy-level results the PMU should develop and monitor all activities, consultants, and partnerships with smarter indicators toward the resilience outcomes at each site, including Rodrigues.*

2. Implementation

→ *Recommendation: Project Management–UNDP and GOM must discuss arrangements for securing all PMU-based contracts through end of project, including the PM and others currently involved.*

→ *Recommendation: Slow procurement–Ensure options for fast tracking procurement are considered and an agreement is reached by January 2015 to facilitate faster procurement, based on NIM modality and by extension following the local procurement law.*

→ *Recommendation: Reporting–Ensure reporting of government co - financing, in particular for office support, human resources, and government financing of "works" and human resources at site level. Record this data in an easy-to-use monitoring and reporting system for purposes of AFB/UNDP at end evaluation.*

→ *Recommendation: Community engagement–Find solutions for more strategic and intensive community liaison work and for instituting policy-level changes, including developing a strategy for and hiring of designated community-based project facilitators to engage with project management for each site, including Rodrigues. Designate a focal point at PMU to oversee community-based relations for each site, setting up a*

mechanism for community-based planning for CCA CCZ in each site by developing a technical planning committee linked to the planning mechanism and ongoing initiative (ongoing vulnerability planning exercise, strategy for women's economic empowerment related to mangrove sensitization and branding, and coastal zone product development).

→ *Recommendation: Knowledge management–Linked to ME recommendation to designate a PMU level ME officer, designate an ME/KM/CB officer, hire a short-term consultant to design a technically vetted ME/KM/CB plan for future implementation and strengthening of the new ME officers capacity for KM oversight. The advisor on KM would be developing the basis for a longer-term KM system for CCA CCZ in Mauritius. This is the role for the AF PMU with a view that it will continue in MOE post project. In line with learning from visits to pilot sites, including Rodrigues, the PMU can become an excellent platform for cross-sectoral coordination for climate change adaptation and EW at the level of the CC impact researchers and for engagement with the site-level communities. The knowledge management system might be designed to facilitate working-level linkages of the various groups and committees and enable involvement of the different project-level communities in project-level decision making and future work planning. A good web interface and knowledge portal with a designated KM officer to be responsible for facilitating these linkages should be established, enabling an online platform for the work of the project set up.*

→ *Recommendation: Policy advocacy–Develop and share a policy paper on cost benefits and the institutional framework being piloted, planned, and needed. This will help designers undertake the risk of no action, the cost of future investment, and the policy changes required for CCA CCZ.*

→ *Recommendation: Policy advocacy–Frame CCA CCZ by fashioning a good communication strategy linked to the knowledge management strategy (see recommendation KM) in order to ensure that the work and risks are understood and the costs are articulated to the public and the policy makers.*

→ *Recommendation: Policy advocacy–Assign a high-level political (or other popular and influential champion), possibly through PMU, which has wide knowledge of activities that impact the future direction of CCA CCZ on Mauritius. Branding this project is a very important aspect of a movement toward sustainable development and community-based resilience in the coastal zone.*

3. Monitoring and Evaluation

→ *Recommendation: Monitoring and evaluation*–Designate *full time ME/CB/KM officer at PMU (cross-reference with KM recommendation below).*

Proposals for future directions underlining main objectives

To reach the project development objective, the project team can continue with its holistic approach to CZA resilience at each pilot site. It is advisable for the team to also prioritize the policy upstream work to garner more political influence and pilot an institutional framework for the project activities to continue and add value to the already developed CC adaptation strategy. This can be thought about in connection with knowledge networking and garnering more visibility. The optimal design and community-based approach for climate change adaptation is of critical importance to national security and to development planning in general. It is work of critical importance to government as the business as usual *ad hoc* approach to CCA CCZ threatens the development of the country and lives.

Outcome 1–CCACZ

→ *Recommendation C*ommunity Engagement Strategy be developed at all sites. It should consider smarter indicator around resilience, the sustainability and scale-up plan. Currently, work with communities is ad hoc and not considering changes required in terms of the community level

coastal zone adaptation approaches. The implementation strategy should clearly target the development of a new protocol or convention that empowers communities in the decision-making and planning processes concerning coastal zone adaptation measures.

→ *Recommendation* CBA methods are promoted throughout government by consultants in learning by doing approach and in media. Project needs to develop a plan to shadow the use of Cost Benefit Analysis CBA in sites with government counterparts.

Outcome 2–Early Warning System

→ *Recommendation:* Flood data collection agreements–Project team can provide an incentive (small project) to MOI to develop a regional cooperation partnership agreement on data sharing across the region to increase reliability of the flood surge system.

→ *Recommendation:* Scope–Co financing options for expansion of system to sea swell risk.

→ *Recommendation:* Rodrigues cooperation and inclusion–For design of an Early Warning system, it is essential for the consultants to visit Rodrigues and/or hold meetings with stakeholders.

Outcome 3–Capacity Development and Partnerships

→ Recommendation: Develop a capacity development strategy–Include training activities to form part of the institutional capacity building strategy;

→ Recommendation: Impact assessment and dynamic monitoring of Capacity Building CB exercises –Examine and document the use made of the training. It is pertinent to know whether the trainees are working in institutions that have coastal management and adaptation as mandates and whether the expertise so gained strengthened the capacity of the institution in that area.

Linkages, Partnerships and Cooperation

→ Recommendation: Follow-up strategy–Employ long term links, i.e. those established such as with UoM and the University of Pretoria and Madras. These external organizations are service providers, and there is currently no strategy for further international cooperation longer term.

→ Recommendation: PMU–It is advisable to gather evidence on how institutions are benefiting from the project activities and are able to initiate measures or policies that would address the risks of accelerating coastal erosion rates without increasing the climate change risks in adjacent properties, which induces ever-increasing costs related to repair of coastal infrastructure and leads to further losses of beach tourism revenues.

Outcome 4

→ Recommendation: Conduct a policy review / study. Integrating adaptation across all relevant institutions and departments is critical and can be effectively supported by a strong coordination mechanism so as to ensure sustained engagement of various sectors and stakeholders in adaptation measures. Ensuring the success of the project requires ensuring efficient institutional mechanisms under one lead institution that commands authority sufficient to bring agencies under one umbrella covering all aspects of climate change and disaster risk management activities. MTE draws attention to the fact that adaptation interventions cut across many sectors and are implemented at different geographical levels. The project team can do baseline research and prepare the necessary groundwork to advocate for systemic approach to adaptation. This will only be achieved in the long run by facilitating the strengthening of the proposed institutional framework through bringing all

climate change interventions under one umbrella located within the highest level of the national decision-making structure.

→ Recommendation: Develop a policy change monitoring framework. The technical committee and an advisory board can provide the project with a framework for guiding the project team and monitoring achievement of deliverables. It is recommended to augment these mechanisms with representation of key actors that would enhance project implementation. In this case, Ministry of Finance and Economic Development would be a good choice, for reasons linked to procurement of goods and services earmarked under the project but more importantly because of an investment decision that would need to be made in the replication phase. Having a representation of MOFED in the project's institutional framework would give the team access to useful guidance on procurement procedures and ways to respond to them. Other institutions, albeit for other purposes linked to the project implementation, might also be considered. Possible cases in point could be the National Disaster Centre, the Ministry of Education, RRA, and relevant NGO's. It is imperative that the level of stakeholder ownership, including ownership by government and semi- or decentralized government agencies and other key stakeholders, be secured at this phase of the project and that it is adequate to allow for the project outcomes/benefits to be sustained.[i]

→ Recommendation: Develop KM and learning activities (including writing a strategy) to support the improvement of climate related coordination and environmental monitoring system. There is structural need for more systemic/functioning national climate related environmental monitoring system in Mauritius. With the new government, the Ministry of environment now also holds the portfolio of disaster management which is positive. The former scattered monitoring system of all coastal zone adaptation interventions and responses can be avoided. The MOESD is a sectoral ministry with the environment mandate, but it lacks the authority in some areas of intervention.

→ Recommendation: Develop a policy framework for integrated M&E framework for CC in CZ adaptation. This should be more closely aligned with development planning through, for example, the incorporation of adaptation M&E into existing national development frameworks. Institutional arrangements should identify clear roles and responsibilities for the involvement of stakeholders at all policy levels.

→ Recommendation: Mainstreaming Support. The project team can consider activities to direct project hired consultants to assist the project team in preparing guidelines for formulation of district- and community-level adaptation plans and promoting a participatory dialogue with all stakeholders at district/village level for preparation of district adaptation plans incorporating priorities of coastal resources and coastal degradation management. Institutional arrangements need to provide an environment that encourages and supports the exchange and sharing of information at all stages of the adaptation process. With the assistance of consultants being recruited, the project should be able to promote (high visibility) mainstreaming adaptation into policy and investment decision-making processes. According to the project team, recommendations to change the guidelines are needed. MTE recommends going beyond mere recommendations to use the project as an advocacy measure to push forward legislation.

Outcome 5–Knowledge Management KM

→ Recommendation: Designate a KM/ME/CB officer. A related concrete recommendation is to support the newly designated officer by recruiting a short-term consultant to help design a

KM/ME/CB plan for future implementation. KM international input can be leveraged to help build a system and support capacity development of the ME officer for KM/ME/CB oversight. The advisor on KM/CB/ME is tasked to demonstrate/practice the longer term KM system (result) for CCA coastal zone in Mauritius as the system should remain in place at project closure in order to continue as CCA CCZ learning and a cross-sectoral collaboration tool.[ii]

Rodrigues

Recommendation 1: AFB project engagement with Rodrigues

→ Develop an MOU with RRA and include components of the reef to ridges coastal zone adaptation project resource centre as the priority "works" and learning entry point;

→ Develop a sub-committee for the AFB project on Rodrigues that includes linkages to University of Mauritius, MOI, Reefs, SHOALS, and other relevant institutions (links to outcome 5 KM and learning networking);

→ Identify and organize a visit to a potential private sector partner for an eco-bus tour on Rodrigues and commission the NGO Reefs to develop learning and digital content.

Recommendation 2: Realization of catalytic Resource centre for transformative CZ adaptation through quality planning

→ *Convene a local government, NGO, and community committee to develop project with project writer;*

→ *Procure a design consultant, i.e. local architect (design this project to be strong for disaster, not shoddy, marine sciences, green, and livelihood focused and disaster proofed). This is a major quality investment;*

→ *Mobilize remaining UNDP SEMPA money (approx. 35,000 USD) to cover all costs associated with the quality design (architecture) and development of the concept);*

Identify an international resources centre design consultant and/or architect, suggesting per diem and air ticket for international marine centre architect to work in-country for 10 days on Rodrigues and Port Louis with a local consultant;

- *For inclusive design process, an expert is needed for quality and safety. Architecture firm can receive a fixed budget to prevent going over cost. There is also an option to be explored to hire an international architect with relevant experience to work with a local architect (who must be on board for local permits, building code, and local context, supervision of construction issues, etc.). Recompense can be free tickets and per diem.*

→ *Employ relevant body NGO or otherwise to facilitate development of learning content for the Rodrigues Resource Centre project.*

Recommendation 3: Early Warning system development inclusion

→ *Synchronize the system design with consultants and RRA. The project team ensures synergies between ongoing disaster preparedness and the design team of the AF EW system, through site visits and consultation with RRA directly. The data collection needs and uses are options that are built into the system in the design stage.*

Recommendation 4: Capacity development-learning linkages

→ *Develop a sub-committee for the AFB project on Rodrigues that includes linkages to University of Mauritius, MOI, Reefs, SHOAL, and other relevant institutions (links to outcome 5, KM and learning networking);*

Recommendation 5: KM

Ensure Rodrigues is linked into AFB knowledge management strategy and that an online platform is created for the community planning for Resource Center.

[ii] This observation is made with a strategic perspective in mind. The stand is justified by the fact that the project is a pilot in as much as it spearheads a new initiative in climate change adaptation in OM. The pilot phase will be replicated and, because of this, all avenues presenting possible scope for improved efficiency should be explored. Strengthening the institutional framework with selected agencies via ministries, parastatal organizations, decentralized government bodies, CSO, and NGOs is essential to ensuring improved project performance while promoting continuity in the pursuit of national efforts in the longer term. For this to materialize, the various key stakeholders should see that it is in their interest that the project benefits continue to flow and that there is the appropriate public/stakeholder awareness in support of the long- term objectives of the project.

[iii] During project implementation, the project management unit can become an excellent learning platform for the more systemic cross sectoral coordination for climate change adaptation and EW at the level of the CC impacts, researchers and for engagements with the site level communities. The knowledge management system can be designed to facilitate implementation working level linkages of the various groups and committees being set up to help facilitate implementation and to focus on enabling involvement of the communities in project level decision making and future work planning. This will involve the development of an appropriate web interface, communication system , knowledge portal and training for the newly designated KM/CB/ME officer to be responsible for facilitating these linkages, enabling and online platforms(communities of interest) for the work of the various committee planning and management committees set up).

ANNEX 1 – REPORT ON PILOT SITES – MTE OBSERVATIONS, ANALYSIS AND RECOMMENDATIONS

Each coastal zone site is unique in terms of driving factors, rate of change, and range of technical options. As the current practices have been unsustainable, the intent of Outcome one work is to demonstrate the way of working and to make strategic interventions to mitigate unsustainable adaptation measures at the three sites and to put in place systems for adaptation so the coastal zone adaptation works and the learned approaches can be scaled to other vulnerable sites across Mauritius. The approach is to do this while strengthening technical capacity to convert climate variability risk management into practical technical interventions appropriate for each vulnerable site.

1. Mon Choisy: Adaptation Strategy.

Findings and Analysis

The issue for adaptation at Mon Choisy is cross-sectorial and involves interlinked environmental, social and economic factors driving loss of coral reef and creating greater impact in term of silt on an already rapidly eroding beach. The earlier attempts to undertake beach restoration by local hoteliers have been ad hoc and rudimentary at best. These efforts are not working. MTE visited the site and observed that the beach is in fact rapidly eroding. This beach has high recreational value to the public and is in a highly desirable and risky tourist location. The adaptation work will include a combination of structural and ecological solutions combined with public sensitization as to the importance of protecting the beach and the goal of increasing and spreading awareness of its overall value in terms of long-term solutions that are more sustainable. The project strategy is to concurrently undertake a feasibility assessment and advance on the sensitization and education aspects concerning the value of protecting reefs and ecology around the beach. The project team has developed a very rich capacity building and public sensitization strategy (Outcome 3) directed at the tourism operators, the government workers and the general public through non-formal and formal education. An 'eco bus' has been purchased and has been retrofit with marine and reef, coastal zone education and adaptation conservation efforts and climate change impacts, adding value to the in the area. The project feasibility work began in October 2014. MTE Team met with the contractors responsible for site assessments during field visits (Oct 27, 2014) and in follow-up meetings at the other project sites and meetings with the project steering committee and technical committee throughout the MTE mission.

Recommendations – also see output analysis

Project management has done an excellent job at procuring this work to a quality international and local team. The only recommendation is to continue to undertake the quality cross sectorial site assessment and feasibility. As the site work is managed by a contracting firm then the only thing to flag at MTE is to ensure the integration of the learning with government departments. Monitoring of the institutional capacity strengthening with government departments is important. Project management has expressed that institutional capacity building and learning is being imparted 'by doing '. This should be reported on in the quarterly reports as results...

2. Riviere des Galets–Adaptation Strategy.

Findings and Analysis
Vulnerability/protection and human safety to sea level rise and storm surge are the key issues. This site is the most vulnerable and risky in terms of human lives. Two people died here in 2007. A key question of the project cost benefit analysis is the relocation for human safety. The project's overall goal (as told to the team by the head of the department of environment) is to save lives. Relocation options analysis requires that implementation goes beyond the scope of CCA project. The climate change impacts have been having devastating impacts with storm surges changing 2-3 meters to storm surge over 6 meters. According to the project manager, there are at least 30 people at severe risk to loss of life and property. The existing poverty is a key consideration. The pilot site raises interesting questions regarding the social situation, housing, and exposure to risks—a lot which have to be considered. The long-term sustainable solution, for example, may be to build a costly seawall toward an optional, considering the worst case scenario and or to do the managed relocation or both?

In 2008, a similar project to relocate vulnerable citizens was attempted and did not succeed (interviews with PM). An obvious reason cited by interviewee was that project designers and host government picked a site for voluntary consideration over ten kilometers away from the original site, which was too far away from the fishermen's livelihoods. The project assessment will look into reasons for the past failure to address these issues and take this into consideration. Maintenance is a key consideration and solutions proposed which will need policy considerations and innovation with regard to partnerships.

Project manager disclosed that site options known to the government include the possibility of a strong seawall; in fact, a rudimentary seawall was constructed after the emergency (2007). This wall is obviously structurally compromised with several holes; its needs repair and upkeep, (long-term solution–seawall for protection).

Recommendations – also see output analysis
Assessment of the relocation option is critical at this site. The relocation option has been and continues to be monitored closely by government. CCA partners are expected to make an assessment of options for further government and stakeholder actions. Managed relocation and voluntary relocation were frequent terms that continued to come up during MTE. MTE agree a good strategy for it is in place, but the project work does offer the opportunity for consideration to giving the choice of the most vulnerable people and to play a role in the design making concerning the options covered by public funds and efforts. The choice to move should be defining criteria for the works and options.

3. Quatre Soeurs – Adaptation Strategy

Findings and Analysis
Coastal flooding, landslides, and frequent stones affect human safety and thus are the core issues at this site. The project is building a refuge center for cyclone related storm surge protection in line with the project strategy that is 100% for protection (save lives). There are 13,000 people living in the affected area. In this site, daily life of the people is reportedly affected by frequent disruption, including weather related events and loss of furniture, goods, and livelihoods. This site is not a safe place. If this work is toward an overall site level outcome of resilience, the planning, management, and strategy will require further inputs to support the team with a holistic site plan to deal with the more systemic root causes to the flood-related risk issues including anti-cyclone season preparations needed, mangrove restoration, women's

livelihood empowerment, and community knowledge and need for sensitization for changing destructive social norms and environmental practices that contribute to the unstable land and beach erosion, i.e. the cutting of the mangroves creates vulnerability and exposure to storm surge according to the project stakeholders interviewed. The intent is to stop at nothing to keep on improving the lives of the people (project director at DOE).

The project implementation strategy (according to PM and team) has been to start with the development of a *matrix of criteria* for the shelter site selection, including vulnerability risk assessment and land use survey. During the visit to the site (October 27, 2014), the MTE met with the key village stakeholders, including the village leader and two community members. The government provided the initial site for cyclone shelter restoration as per the original plan, but it was found inappropriate. The building proposed was an old government building, too risky and small, housed in an unkempt location directly on the coast. The project team immediately engaged in planning with community level stakeholders, including community council, the local private sector, and impacted citizens and collectively determined the best way was a more costly option. Team began a government-vetted process to acquire (take) land to build a safer, multi-use facility site for construction of the planned refuge shelter. The MTE took note of the project team's steps to identify the optimal site, which was privately owned, and then took steps to forcibly acquire it. The project team was relieved when this idea was abandoned due to tensions felt between local land owners, who did not agree to the terms of the land acquisition. This was a big risk to project success; the risk of generating problematic community-based tensions to the overall project implementation is key project learning. The team moved on without contest to a private purchase option. The team visited the new site and finds it to have an excellent high location and agreement of the community as to the use and its viability.

Access roads an escape and access route still needs to be worked out. A feeder road to enable safe access in the event of an emergency is essential to the successful realization of the cyclone shelter that serves the 13000 people. The project manager assured the team that emergency access road for broader community area was part of the land agreement and that this aspect would be factored into the new design. In addition, as a pilot, the team has a question to answer by project end: whether appropriation by government in the public interest in climate-related events is the most cost-effective, appropriate way to acquire land for CCA projects. Certainly there was learning based on this experience that can be input into land bylaws, and the team questions how this would be fed up to bylaws as a result of the demonstration project... In the end, the team purchased land from a local sugar company, Sugot-Fermey, for 9.9 million rupees (approximately USD 350,000), and the cost of this was ultimately increased but with promise of a much more appropriate outcome. The approach taken was commended by the evaluators as an appropriate way forward at this site. Disagreements with the community and, in particular, a land dispute would not prove constructive for a successful pilot intended to show constructive engagement for CCA.

Beach restoration works–Innovation/Partnerships MTE learned that JICA is active on coastal zone work. Based on interaction with them at a MTE technical committee meeting, JICA is a trusted partner for cost-effective innovation and a natural partner. JICA is doing innovative beach reconstruction.

Organizing Community-based Resource User and Producer Groups. The team engaged two community-based organizations and several NGOs, including UNDP/GEF and SGP, at the site level to support implementation. These are promising much learning for future coastal works and for CCA approaches. Cost benefit analysis on the options for CCA and including ecosystem-based approaches in sites is still being piloted.

Recommendations – also see output analysis
MTE feel the strategy for access to the refuge center during emergency is still not so clear. Such partnerships need to be further documented in term of overall results. In terms of another key observation/finding the MTE feels, however, that CCA and all land acquisition-related issues will require some hard choices, certainly in the case of/process of land acquisition. These are lesson learned based on this project to date and the insights on the use of eminent domain need to be taken into account for future land acquisition goals.

4. Rodrigues–Adaptation Strategy
The MTE participated in the first joint Rodrigues and project planning meeting (November 17-18, 2014) whereby the AFB funding for coastal adaptation works, early warning system, policy review, and capacity building was discussed. By the end of these meetings (held with key stakeholders (see annex list of meetings), a plan was agreed upon with the head of the environmental department. This collaboration is to be formalized in a project Rodrigues MoU, December 2014. While on the island, the MTE witnessed and learned about interconnected coastal zone management issues. Visible effects of the chronic land and marine degradation as root causes of the coastal zone management issues and actions on the island need to be considered from a holistic and root causes perspective. The scale of the natural resource management and environmental degradation issues will benefit from a holistic, strategic intervention for coastal zone adaptation. The project strategy for Rodrigues is thus viewed as *the right approach* and entry point, but the success is contingent on the national and provincial buy-in for a vision in line with a longer-term adaptation plan. The catalytic interventions being introduced will lead to implementation of a quality planning and *transformation exercise* catering to the urgent needs for systemic capacity and CCA learning, environmental monitoring, enforcement, and dynamic coastal zone adaptation plan needs.

a. Climate Change Adaptation Resources Center.
The main plan of the project teams for Rodrigues is catalytic investment in the re-conceptualization and the reconstruction of an existing public building into a *Climate Change Adaptation Resource Center* as entry point for future changes. The project is to build on synergies and concepts embodied in the earlier GEF funded project, SEMPA to scale up the *co-management approach* through strategic entry point as a *quality multi-use marine resource center*. The SEMPA project (2008-2012) was a demonstration of natural resources co-management through creating resource users groups and empowering community member's in decision-making about the resource management. The resource center should thus build on what exists with initial scoping of conducive project environment as a first step.

The island has a regional development and land use plan (neither being implemented). The annual provincial budget is facilitated by the local assembly at the end of September and presented for cabinet approval each year. To date it needs a practical staged plan for transformative change. According to interviewees, the islands' development budget is highly influenced by the relationships and alignments with the financial secretary FS. Budgeting and co-financing will be necessary to help implement the Rodrigues plan for CCA. In the past, Rodrigues had a small budget, approximately 400million Rupees, for capital expenditures, but this is changing. The team leader said that there is 1 million rupee available this year to support project activities.

There is an urgent need for monitoring and research to guide environmental policy and programs. The MTE earned that coastal zone-related research is happening, but it is not systemic or being communicated effectively to government in a useful way (interview with RRCM). This can be better coordinated through the resource center as a platform and entry point for coordinating research for joint

community and government decision-making. For example, research activities, including those ongoing with the University of Mauritius, SHOAL, and MOI, can be better coordinated to support local government and community level planning, monitoring, and enforcement activities. In addition, as water scarcity is the most pressing human problem on Rodrigues, it can be highlighted in the resource center as an issue for co-management approaches for policies and enrollment of environmental regulation. The resource center would thus become the platform for the integration of research and science, climate change learning, community dialogue, and co-management approaches that will make a difference.

A good example of the missing linkages MTE learned about was a fisheries management good practice, which involved an agreement for short-term octopus fishery closure by fishermen themselves. Although a success, undertaking of the stock rates must also be included in the management decision. Thus highlights the important science-to-policy in co management approaches taking into consideration the scientific evidence to policy level decision-making is highlighted. The team learned that earlier recommendations for land use planning were impractical and therefore not being implemented. As it is related to climate change on the coastal zone, the project might undertake a scoping in line with a master CCA development plan and provide practical steps included the environmental/climate change aspects with a simple prioritized action plan (discussion with chief of administration's office).

In short, the CCA Resource Center concept can build upon SEMPA (particularly good approach for conflict resolution and alleviating the likely tragedy of the NRM /CCA related commons) and include immediate livelihood benefits to the community (community platform, jobs, and tourism benefits). The team can undertake support for community organizing and mobilization for the *quality architecture* of the center. Participants and MTE agree it should; have an educational and dynamic learning component, including marine and land research (evidence for policy) and a livelihood component (tourism). It should also be linked to a greater network for research and policy in Mauritius facilitated by project inputs. The education component can include 3 D models of a ridge to reef. It can potentially have access to sea with snorkel trails and a walk under sea. It should be realized in phases of development, involving the press as soon as design is ready.

For good linkages of resource center project concept to AF project, at a minimum three things should be in place, including: 1. climate change adaptation aspects (see recommendation below) 2. Community linkages (planning–participatory) and 3. Sustainable and disaster-proofed building design (quality architecture and employing standards for good building design). The project should be done in collaboration with the local government and communities and involved an agreement on co-financing that immediately include USD 1.2 million for UNDP SEMPA budget for design and architectural work, 1 million from RRC for basic building works, and AF fining for the education component, including facilitating study tours to Mauritius and negotiating an Eco Bus for Rodrigues. The management might have a partnership structure building on co-management of SEMPA.

b. Early Warning System

The financing for adaptation on Rodrigues is planned by the project team to include a local model for storm surge and finances for a wave rider buoy to support real time data collection on wave height and wave characteristics data. The work will also consider the issue of reliable emergency alerts together with MET services. The team learned that the RRC is already developing a system for 24/7 monitoring of sea data and is building a tower with observatory–a fisheries project. The project must therefore ensure a synergy with these ongoing activities.

Recommendations and analysis

See recommendations section in report above.

ANNEX 2 - 0UTPUT ANALYSIS – RESULTS TRACKER

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
Expected Outcome 1. Adaptation of three 'hot spot' pilot sites			
1.1 Detailed technical assessment of each site, with chronology of previous flood and erosion events and collection of near shore oceanographic data, during "quiet" periods and "active" periods (one month each) to inform the design of the technical interventions at each of the three sites. 1.2 Technical design of coastal protection measures at each of three sites, with detailed costing, carried out in a gender sensitive way	**Consultancy Services for Coastal Adaptation Measures at Mon Choisy & Riviere des Galets** The first round of procurement for consultancy services for the preparation of feasibility studies, Environmental Impact Assessment Reports, Design, Preparation of Bid Documents and Supervision of Works for the implementation of coastal adaptation measures at Mon Choisy and Rivière des Galets, Mauritius was cancelled by the Departmental Bid Committee of the Ministry as the price quoted by the first ranked bidder was substantially higher than the estimates in the AF Project document. A re-bid exercise using UNDP platform was approved at the Project Steering Committee. A Letter of Agreement (LoA) was accordingly signed on 16 October 2013 between the Ministry of Finance and Economic Development (MoFED) and the UNDP CO. The Terms of Reference (ToR) for the consultancy services was revisited by the Technical Committee and the Request for Proposal (RFP) document was adapted as per the UNDP format and requirements. The revised RFP was reviewed and cleared by the UNDP Regional Technical Adviser. The Request for Proposal for the above consultancy services was subsequently re-launched on 26 March 2014 on the UNDP platform. The RFP for the above consultancy services was uploaded on the UNDP, Procurement Policy Office, COMESA and the Ministry of Environment & SD Websites. A Pre-bid conference was held under the chair of the UNDP CO on 08 April 2014 to better inform consultants on the requirements of the project. Site visits were also organised at Mon Choisy and Riviere des Galets with the bidders. Eight bids were received at the opening of Bids on 24 April 2014 and a bid evaluation committee was constituted under the chair of the UNDP CO (including Technical Support from the UNDP RTA on mission in Mauritius from 12-16 May 2014). The Technical evaluation of bids was successfully completed and the Technical Evaluation Report was submitted to the Procurement Supplies Office (New York) for vetting prior to approval by UNDP Regional Office. The Contract for Consultancy Services for Coastal Adaptation Measures at Mon Choisy and Riviere des Galets was awarded to Indufor Oy on 09 Sep 2014. An Inception Meeting was held on 19 Sep 14 with Indofood Oy, UNDP and the Ministry of Environment and Sustainable Development. The Inception Workshop was held on 25 Sep 14 to kick-start the project activities. The Detailed technical assessment at Mon Choisy and Riviere des Galets was started. Equipments were Deployed at the project sites on 19 September 2014 and the Equipments were retrieved on 28 October &01 November 2014 The option of resettlement of the vulnerable communities at Riviere des Galets, as part of adaptation measures, was also explored under the AF Project. Comprehensive surveys were completed to assess the socio-economic and environmental vulnerability of the local community and their willingness to the proposed option of resettlement. Following awareness campaigns and house to house surveys conducted by the project team, some 90% of inhabitants living on the sea frontage at Rivière des Galets were agreeable to the relocation project, with 49% willing to be relocated without any conditions. An information paper was sent to the Cabinet Office to inform on the proposed adaptation project (relocation). The Cabinet Office thereafter	**Output: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6** **USD 128,972**	MTE vetted the approach and find it to be appropriate and in line with the overall project agreement and expected results. The interventions possible at each site are being assessed scientifically through a combination of social, economic and environmental scientific inquiry. The approach to deciding on the best case option is the **Cost Benefit Analysis CBA approach** which is becoming quickly a flagship product and brand approach associated with this project.

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
	approved the conduction of a feasibility study as part of the consultancy services for Mon Choisy and Riviere des Galets for a long term sustainable solution for Riviere des Galets.		

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
1.3			
1.3 Successful construction of physical interventions at each of the three sites.	The Project site (as per the ProDoc) was reviewed at the Inception Workshop held on 30 August 2012. The recommendation of the Technical Committee to consider plots located uphill at Quatre Soeurs was approved by the PSC. The first plot identified by the Technical Committee was not sold to the Government by private owners. Accordingly, the technical committee and the project team visited 10 site visits, 3 Community Based Committees at Quatre Soeurs. An extent of 12850 m^2 of land owned by the private sector (Ferney Ltd) was identified for acquisition purposes at Quatre Soeurs. The criteria used for site selection were as follows; accessibility, altitude, drainage system, ancillary works, utilities and road enlargement (if warranted). The Ministry of Public Infrastructure, NDU, LT & S confirmed that the proposed site at Quatre Soeurs were off landslide prone areas. The views were supported by the Japan International Cooperation Agency (JICA) experts based at the Ministry. The land acquisition procedures were initiated by the Ministry of Housing and Lands. The preferred portion of land selected by the Technical Committee required excision from two portions of land. The Morcellement Plan required amendments and was submitted to the Morcellement Board of the Ministry of Housing and Lands for approval. The Government Valuation Office completed the site assessment of the preferred plot of land at Quatre Soeurs. An offer for acquisition of land was made to Ferney Ltd by the Ministry of Housing and Lands and the offer was approved by Ferney Ltd on 18 June 2014. The Solicitor General appointed a Notary Public for drawing of the deed of sale. The signature of deed of sale is under process. The land acquisition was a lengthy process and was started since 2012. The RFP for Consultancy Services for the Design, Preparation of Tender		Output 1.3 work plan will be determined as per the results of the feasibility exercise conducted at each site by international firm who has been awarded responsibility for inter-disciplinary studies and for monitoring implementation. The MTE feel that in the case of Quatre Sours, although the decision to construct an evacuation center has been determined based on baseline DRR analysis. In addition , MTE find there may be scope to develop at same site more ecological interventions with regards to the root causes of beach erosion including over cutting trees and need for revising zoning for land use and also community organizing for local marine and natural resource management. The mangrove plantation and sensitization project is demonstrating the importance of involving the community in Coastal and Marine

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
	Document and Supervision of Works for Construction of a Refuge Centre, Drainage System and Ancillary Works at Quatre Soeurs would be launched upon completion of the land acquisition procedures. **Mangroves plantation project** 20,000 mangroves seedlings were planted in the lagoonal areas of Grand Sable, Petit Sable and Quatre Soeurs by Grand Sable Fishermen Association (GSFA) which comprise of 51 members (fishers). A Memorandum of Association was signed between Grand Sable Fishermen Association and the Ministry of Environment and Sustainable Development for implementation of the project and enhances local community ownership. The project also showcased a Public-private and NGO/associations partnerships. This project enabled regrouping of fishers under a formal association (registered with the Registrar of Association). The fisher community earned an alternative livelihood during the project period, especially during the low catch period. The mangroves plants were reported to have reached a height in the range of 45 to 65 cm (after one year's time). The surveillance is being ensured by the National Coast Guard and Fisheries Protection Services. Currently the maintenance programme is being sustained. 5 tranches of USD 7,000 were disbursed to GSFA (in line with the Memorandum of Agreement). The main Stakeholders involved during project implementation were UNDP CO, UNDP GEF/SGP, AUSAid, National Coast Guard, Ministry of Fisheries, Ministry of Housing and Lands, MoESD, Forestry Services, Local Authorities. As part of the awareness campaign and information dissemination, the mangroves plantation project was captured by the Mauritius Broadcasting Corporation (MBC). A TV reportage was mounted to demonstrate the local community's involvement and commitment in protecting their coastal environment while at the same time preserving their livelihood. The reportage was broadcasted on the television news bulletin. For sustainability and capacity building of the coastal communities sensitization campaigns at the project sites are being undertaken under Outcome 3 by Reef Conservation (NGO). **Mangroves sensitization project** The mangroves awareness-raising and sensitization campaigns were undertaken by Grand Sable Women Planters' Farmers' Association (GSWPFEA). This project also allowed regrouping of Women Entrepreneurs under a formal association (registered with the Registrar of Association). A Memorandum of Association was signed between Grand Sable Women Planters' Farmers' Association and the Ministry for implementation of the project and enhanced local community ownerships. The following stakeholders were involved in the project implementation: UNDP CO, UNDP GEF/SGP, AUSAid, Ministry of Fisheries, AREU, MoESD, and Local Authorities. The Project budget was to the tune of USD 15,000 as per the signed Memorandum of Agreement. A train the trainers programme on mangroves propagation was delivered by the Ministry of Fisheries to GSWPFEA. 10 potential trainers were identified among the women association and trained to conduct the mangroves sensitization programmes in villages in the south-eastern coast of Mauritius and deliver talks at primary schools level. The sensitization campaigns were completed at Quatre Soeurs, Grand Sable and Bois des		Management A globally proven idea that is central to the approach goes farther. It is the idea of community based engagement for the stewardship/protection over the local natural resources. This is a central NRM concept of building and or facilitating a trusting relationship between government extension and community members for natural resource management. Sometimes it makes sense to create community originations that are need to make this project work. PM approach was based on existing SGP intervention Success actually came when the PM began cooperation with the local fishermen directly involving them in the 'works' of planting the seedlings. The issue will be sustainability and the PM has a plan to continue to work through the fisherman organisation for many activities that require the communities input. The other successful aspect of this project has been the engagement of the local women's organization for sensitization and for the production of a craft that include the mangrove plant. This cooperation can also be extended as the women's organization are a resource producer group and are thus key for behavior change in the communities . Their involvement will help change values around mangrove which is a key issue in this site. They are also developing a sees grass and other sea products that might be harvested for economic benefit highlighting the value added of sea products. MTE recommend involvement of thee groups through project end.

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
	Amourettes Primary Schools. The target groups were primary schools pupils of Standard IV to VI. Some 350 school children were sensitized. The objective of the project was to empower the women community on alternative income-generating activities and help them mitigate the challenges of climate change and sustain their livelihood. Two sewing machines were procured under the project for production of promotional materials (cloth bags) thereby adopting a zero plastic strategy. The promotional materials were distributed during the mangroves sensitization campaigns. A logo competition on mangroves was also launched at Secondary Schools level in the south-eastern region of Mauritius. The final logo was designed and printed on the promotional materials (cloth bags). The Mangroves Project won the Island Bright Spot Award 2013 organized under the Global Island Partnership. The Project was showcased at the UN SID's Conference held in Samoa in August 2014 by the President of GSWPFEA and the Minister of Environment & SD. The production of ecofriendly promotional materials (cloth bags) for distribution during sensitization campaigns by GSWPFEA was ongoing. The Training of coastal communities (sensitization on climate change) at the project sites is being undertaken under Outcome 3 by Reef Conservation (NGO) for sustainability		
1.4 Analysis of data and development of recommendations on how the interventions can be adjusted for other vulnerable coastal locations in ROM	• Upon completion of consultancy services and works		This is a key area for sustainability and work should be initiated with the consultancy. It should also be done in consultation with key institution in country that could consult the feasibility at the other sites post project or even start during the time with in this project with government co financing support. The need to begin feasibility using the approach of this project is eminent given the disaster predictions in relation to climate change for Mauritius. This is planned .
1.5 Monitoring programme designed, to include scoping of suitable parameters, including beach width and slope; depth of adjacent lagoonal sediments; wave height, period, and run-up; direction of nearshore currents, etc.	• Upon Completion of Works		The project should develop a short TOR to guide the consultants and urge them to provide recommendation for coastal monitoring programme that will be part of an Environment Management Plan (EMP), as required by local legislation. In conformity with the First Schedule (Part B) of the Environment Protection Act 2002, such integrated coastal protection works would require an EIA. Additionally, according to the Section 18 (2) (l) of the Environment Protection Act 2002, the EIA report shall contain an environmental monitoring plan (EMP). The EMP captures issues such as monitoring to be done in the project and neighboring areas

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
			in terms of physico-chemical, ecological, socio-economical, geomorphology of the beach, amongst others.
1.6 A targeted coastal process/weather event monitoring system in place	• Upon Completion of Coastal Adaptation Works		
Expected Outcome 2: Early Warning System			
2.1 Assessment of the current sea state monitoring systems (Mauritius Meteorological Services and Mauritius Oceanography Institute) and definition of required critical parameters and operational requirements for an early warning system	The first round of procurement was completed and the bid exercise was cancelled as price quoted by the best evaluated bidder was substantially higher than the budgetary allocation in the AF Project document. A Memorandum of Understanding (MoU) was signed on 13 March 2014 between the Ministry of Environment and Sustainable Development (MoESD) and the Mauritius Meteorological Services (MMS) for joint implementation of the project component. The RFP document for Consultancy Services for implementation of an Early Warning System for incoming Storm Surge for the Republic of Mauritius (RoM) was drafted and reviewed by the Technical Committee. The RFP was submitted to the World Meteorological Organization (WMO) through the MMS for vetting by Dr Boram, Expert from WMO. The vetted RFP document was launched to the shortlisted international experts, as submitted by the MMS. 1 bid was received from Deltares-The Netherlands. The bid evaluation was completed under the Chair of Meteorological Services and the Consultancy Services for Implementation of an Early Warning System for incoming Storm Surge in the RoM was awarded on 17 October 2014 to Deltares (The Netherlands). The inception workshop is scheduled on 11 November 2014 to kick-start the project activities.	**Output: 2.1, 2.2** **USD 38,173**	Team met with project team for the current Early Warning System (EWS) in Mauritius which is well known for dealing with cyclones. Team met with the Meteorological Services who rely on observation systems in Mauritius and collaborate closely with sister organizations including MOI. The AFB exercise will focus on improvement in the existing EWS to cater for sea surges which affects the coastal communities in the southern and western part of Mauritius. The team learned that the disaster risk reduction component and linkages will be improved through Is becoming National Emergency Center and pushed from PMO to MoE (much lower in hierarchy). DRRMC involvement in system design and also capacity strengthening is key. This proposal could also consider improving the application of EWS. DRRMC should be engaged on a drill and for capacity building in terms of alerts and communication related to the use of the system.
2.2 The early warning system installed and implemented (with links to early warning system for cyclones), with communication linkages established from level of National Coast Guard at Headquarters down to the level of coastal communities.			Team met (November 13, 2014) with the ***National Disaster Risk Reduction Management Centre*** which has become recently operational (with a defined cross sector membership and terms of reference) and is the main mechanism for operational crisis response in consultation with the national disaster committee who is responsible for rationalizing and creating functional links between the exiting cyclone

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
			early warning system, managed by the Mauritius Meteorological Services, and the proposed storm surge EWS. The coordination is being effectively facilitated by the PM and once the specific inputs from both the MMS and and Mauritius Oceanography Institute are defined during this first phase of the sub-project (assessment of current sea state and storm warning systems), the day-to-day operations and responsibilities of the two key organizations (MMS and MOI) will be clearly designated and then managed through the National Disaster Committee. MTE learned in consultation with Delatres firm awarded contract that the system being developed will deal with storm surge generated from wind but the tidal wave effect that requires more computer capability and human resource will be the next step. Models are being developed together with MOI, the NDRM and the Met services. A capacity development plan is being developed. Linkages between the MMS services and MOI data collection is be examined and optimized, and staff requirements for 24-hour/day monitoring are validated to be addressed through the programme intervention on EW.
Outcome 3. Capacity Development			
3.1 "Handbook on Coastal Adaptation" packaged as training modules for coastal communities, relevant Government agencies, and private sector stakeholders (such as hotel operators); training sessions delivered on a regular basis over the course of the project (at least twice annually). 3.2 Short course on Coastal Engineering designed and delivered (twice during programme	A MoU was signed on 22 May 2014 between this Ministry and the University of Mauritius (UoM) for long term collaboration during implementation of the Training and Capacity Building component and sustainability of the project. **Two** Handbooks entitled 'Training Manual for Coastal Protection Works' and 'Training Manual on Coastal and Marine Environment for Engineers' were produced under the programme. The Training Manual for Coastal Protection Works was endorsed by the Council of Registered Professional Engineers for CPD for engineers. • Knowledge on Climate Change adaptation through training enhanced • Monitoring of impact of courses delivered under the project on	**Output: 3.1, 3.2, 3.3** **USD: 142,397**	Capacity development approach need to be more systemic and linked to KM and ME... These are however excellent inputs and learning has been dissertated. MTE met for instance with a member of a training on CBA in the MOF and she has been making a difference (influence) with regards to her knowledge gained of levels of investment needed for future adaptation efforts (including costs) and also the risk by not watching this project closely – an excellent result.

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
period).	performance of participants started on a sample basis through design of feedback questionnaires.		
3.3 Specialized course on Cost-Benefit Analysis of coastal adaptation measures designed and delivered (annually, over four years).	• Follow up by the Project team on the impact of the training courses organized • Lessons learnt from the training programmes are used for enhancement of training in the future through feedback reports The **Short Course on Coastal and Marine Environment for Engineers (CMEE)** was conducted from 17 to 21 September 2013 at the University of Mauritius. A total of 56 beneficiaries from Ministries, departments, local authorities and the private sector attended the CMEE course. The second batch of the CMEE Course was replicated in the Rodrigues islands in July 2014. Some 28 participants from the Rodrigues Regional Assembly, private sector and NGO's attended the workshop. A site visit was also held at petite Butte in Rodrigues. The project allowed building of the institutional capacity in the public, private and NGO's sectors in Mauritius and Rodrigues (civil servants/finance cadres/technical cadres). **Short Course on Coastal Engineering (Specialisation 1)** The Short Course on Coastal Engineering was conducted in October 2013 over a period of two weeks by Dr Gary Mocke, International Consultant from Worley Parsons RSA (Pty) Ltd in partnership with the University of Mauritius (UoM) and Ministry of Environment and Sustainable Development (MoESD). The short course was kick started at the inception workshop held on 21 October 2013 at the Intercontinental Hotel, Balaclava in the presence of Dr. the Honorable Rajeshwar Jeetah, Minister of the Tertiary Education, Science, Research and Technology, Honourable Devanand Virahsawmy, Minister of Environment and Sustainable Development, Professor T. Ramjeeawon, Dean of Faculty Engineering, University of Mauritus, Mr. P. Jhugroo, Permanent Secretary, Ministry of Environment and Sustainable Development, Mr. Simon Springett, Resident Representative, UNDP and Mr. P. Kallee, Acting Director, Ministry of Environment and Sustainable Development. The following members attended the workshop; the Japanese International Cooperation Agency (JICA) team, Dr. M.N. Nowbuth, Associate Professor, Faculty of Engineering, University of Mauritius, and **54** participants from Ministries, Departments, Local Authorities and the private sectors. The beneficiary institutions were as follows; Ministry of Environment and Sustainable Development, Ministry of Housing and Lands, Ministry of Public Infrastructure, NDU, LT & S (Public Infrastructure Division), Prime Minister's Office (MID Commission), Ministry of Fisheries, Ministry of Local Government & Outer Islands, Road Development Authority, Tourism Authority, National Development Unit, National Coast Guard, Local Authorities (District Councils and Municipalities),Mauritius Oceanographic Institute, Commission for Environment (Rodrigues Regional Assembly), Beach Authority, Outer Islands Development Corporation. The **Private Sector beneficiaries were as follows;** Dagon Consulting Ltd, Gibb (Mauritius) Ltd, Lux Consult Ltd, University of Mauritius, Scene-Ries Ltd, Servansingh Jadav and Partners, University des Mascareignes. 54 Participants from Ministries/departments, local Authorities and Private Sectors received a certificate of participation. **Short Course on Coastal Engineering (Specialisation 2)** **Procurement** The Request for Proposal for delivery of a Short Course on Design of Coastal Adaptation/ Protection Structures targeted for Practicing Engineers in the Government and Private Sectors was launched by the UoM on 26 February 2014. **2** bids were received at the opening of bids on 28 March 2014 and a Bid Evaluation Committee (BEC) was constituted under the chair of the UoM. The BEC recommended cancellation of the		

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
	bidding process as the price quoted by the lowest responsive bid was substantially higher than the estimates. **Formulation of Short Courses on Coastal Engineering by International Expert** Prof. K. Murali from the Department of Ocean Engineering, Indian Institute of Technology Madras (IITM) was invited by the UoM for the formulation of short courses in the field of Coastal Engineering for the Republic of Mauritius. Accordingly, Prof. K. Murali effected a visit in Mauritius from 20 to 23 May 2014. During his mission in Mauritius, Prof. K. Murali delivered a half day workshop on 22 May 2014 at the UoM. Some 50 Participants from Ministries/Departments, local authorities, the private sector and University Students attended the workshop. The outcomes of the working session were as follows; • Design of a short course on design of coastal adaptation/protection structures tailored to specific case studies in Mauritius to be delivered in August 2014 • Possibility of a long-term collaboration in the design and implementation of other short courses on coastal engineering • Joint supervision for at least 2 PhD students • Incorporation of IIT Madras in the Technical Committee of the Project for vetting on consultant's design proposals for adaptation measures in connection to Component 1. Professor K. Murali effected visits at the AF Project Sites; Mon Choisy and Riviere des Galets and shared his experiences in the field of coastal engineering with MoESD and UoM staffs. A debriefing session was also held at the seat of MoESD. On 23 May 2014, Professor K. Murali also made a courtesy call to the Honourable Minister of Environment and Sustainable Development and the Permanent Secretary of the MoESD. **Short Course on Coastal Adaptation Structures (soft measures) – A case study of Mon Choisy** The Short Course Short Course on Coastal Adaptation Structures (soft measures) – A case study of Mon Choisy was delivered from 04 to 08 August 2014 at the Faculty of Engineering, University of Mauritius. **Resource Persons** **Three** resource persons from the Indian Institute of Technology of Madras, India conducted the Short Course, namely: 1. Professor Dr-Ing.E.h. V.SUNDAR, Head of Department of Ocean Engineering 2. Professor Kantharaj MURALI, from the Department of Ocean Engineering, IIT (Madras) 3. Professor S.A.Sannasiraj, from the Department of Ocean Engineering, IIT (Madras). A total of **41** participants from the following sectors followed the course; **Foundation Course on Cost and Benefit Analysis of Coastal Adaptation Measures (CBA)** The Short Course on CBA was delivered from **2 to 11 December 13** at UoM. **41** participants from the technical/finance cadres of Ministries/departments and local authorities attended the course		

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
	Specialised Course on CBA of Coastal Management and Adaptation Options to Climate Change A paper was submitted to UN Addis Ababa on the in country requirements in the field of Cost Benefit Analysis and Climate Change Economics (CBA). Accordingly, a Specialised Course on CBA by resource persons from the Centre for Environmental Economics and Policy for Africa-University of Pretoria was delivered from 08-12 September at the UoM. **38** participants from the technical/finance cadres of Ministries/departments/local authorities attended the course. A Handbook on CBA of Coastal Management and Adaptation Options to Climate Change is expected to be completed by end of December 2014. **Online Learning:** All course materials are accessible through the University of Mauritius (UoM) website on the following link; **http://lcms.uom.ac.mu/lms/course/view.php?id=585** **Feedback** 'A feedback report on the overall course and lessons learnt was submitted by the UoM.		
Expected Outcome 4: Institutional and Policy			
4.1 A National Coastal Zone Adaptation that addresses all perceived climate change risks in the coastal zone of ROM over at least the next 20 years, with recommendations for supporting policies and regulations.	The list of acts (RoM) was compiled by the project team. A gap analysis was undertaken at the technical committee and was used as a basis to develop the Terms of Reference of the consultant for this outcome. The Terms of Reference for recruitment of an International Consultant for Policy Mainstreaming was drafted and expected to be launched by December 2014 Discussions have been held with the Integrated Coastal Zone Management Division of the Ministry on the possibility of setting up a statutory committee to deal with issues pertaining to climate change in the coastal zone.	**Output: 4.1, 4.2, 4.3, 4.4 USD (Nil)**	This area needs work. The project team will be engaging a policy consultant and this area can begin to move forward … Attention should be given to cross sector coordination and o building on CCA and EW policy work completed to date.
4.2 A set of recommendations on best technical and institutional adaptation practices suitable for the coastal zone of ROM.			
4.3 Definition of the required structure and processes for one "clearinghouse" for climate change oversight in the coastal zone of ROM (a unit or institution, or collection of individuals from various agencies, which is able to make final decisions on the climate appropriateness of future development projects; also having a follow-up enforcement capacity).			
4.4 Recommendations for new economic instruments			
Expected Outcome 5: Knowledge Dissemination and Management			
5.1 Handbook, training modules, and website content capturing best coastal adaptation practices for the Mauritius context.	Terms of Reference for recruitment of a local consultant for branding of the project has been drafted and expected to be launched shortly	USD (Nil)	This are needs a strategy for developing a useful system for KM and learning t... The KM should become a modality for implementing this project linked to results in outcome3

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
5.2 Dissemination of lessons learned from the programme with coastal stakeholders in other locations in the southern Indian Ocean.	First Regional Seminar planned in July 2015	USD (Nil)	and 4... Work has advanced but it is lacking a strategy for sustainability and for refirfcning learning coming from the project...
5.3 Interpretive signs and small-scale models of coastal processes designed and installed at each site, explaining the science of climate change and coastal processes (in lay terms), so that the linkages between weather, stability of coastal features, and adaptation measures are clear.	First Design of Interpretive signs and small-scale models of coastal processes delivered by end of November/December 2014.	USD (Nil)	
5.4 Public awareness campaigns on climate change in the coastal zone designed and delivered, involving the Mauritian media (TV, radio, Internet).	A Memorandum of Understanding was signed between Reef Conservation (NGO) and the Ministry for a concerted effort for dissemination of information on climate change. A Marine Mobile Education Unit was developed under the project in collaboration with the Private Sector (Rogers Group) and Reef Conservation (NGO) for knowledge dissemination on climate change adaptation around the RoM. Public awareness campaigns using the marine mobile education unit were held at Grand Sable and Mon Choisy. 1 3D Model for the project site Mon Choisy was produced under the project The First Educational tour on importance of mangroves ecosystem and alternative livelihoods for the fisher community and Climate Change adaptation was held at Ile D'Ambre in September 2014 in collaboration with Reef Conservation (NGO) and Yemaya Adventures (Private Sector) Representatives of GSFA, Ministry of Fisheries, National Coast Guard, UNDP, Reef Conservation participated in the educational tour The project was also showcased at the World Environment Day 2014 in Mauritius through exhibitions, talks and presentation on climate change adaptation. Short TV Reportage and videos were also produced for the project site (Riviere des Galets/Grand Sable/Educational Tour at Ile D'Ambre). A documentary on Climate Change was also broadcasted on BBC. The mangroves project was showcased at the international UN SIDS Conference held in Samoa in September 2014 by the president of the Women Association and the Minister of Environment & Sustainable Development. Press articles on the AF Project were also published in local newspapers, UNDP Websites, International Magazines (The Economist), NGO's Magazines Two Resource Centres on Climate Change (1 in Mauritius and 1 in Rodrigues) will be set up under this project to disseminate information on climate change both in Mauritius and Rodrigues. Two buildings have already been identified and are being renovated to house the resource centre	**USD 20,578**	
5.5 Priority ranking of vulnerable coastal sites established, to guide the order of future investment by the Government of Mauritius and the private sector.	Terms of Reference drafted and expected to be launched end of 2016. An inventory of all vulnerable sites has been done by the project team and will be replicated into a GIS Map.		
EXECUTION COSTS		USD: 174,101	
TOTAL		USD:	

Output Targets	Implementation Strategies	Expenditure	MTE Remarks
		504,222	

ANNEX 3 TOR AND SIGNED ETHICS FORM

United Nations Development Programme / Government of Mauritius

TERMS OF REFERENCE

Mid-term Evaluation of the AFB-funded UNDP-supported Project
"Climate Change Adaptation Programme in the coastal zone of Mauritius"
Project Id 00080227 - PIMS 4453

TITLE:	International Consultant – M&E expert, Team Leader National Consultant – Local expert
SECTOR:	Climate Change Adaptation
LOCATION:	Republic of Mauritius
DUTY STATION:	Home-based and UNDP Country Office / Ministry of Environment and Sustainable Development, Port Louis
DURATION:	International Consultant: 26 working days - including a 15 working days (3 weeks) field mission - spread over 10 weeks National Consultant: 24 working days in Mauritius spread over 10 weeks
STARTING DATE:	20 October 2014

1. INTRODUCTION

This is the Terms of Reference (ToR) for the Mid-Term Evaluation (MTE) for the UNDP-supported Adaptation Fund financed project titled Climate Change Adaptation Programme in the coastal zone of Mauritius (PIMS 4453) implemented through the Ministry of Environment and Sustainable Development, which is to be undertaken in July 2018 (initially July 2017). The project started on 30 August 2014 (inception workshop) and is in its third year of implementation. This ToR sets out the expectations for this MTE.

2. PROJECT BACKGROUND INFORMATION

The Republic of Mauritius (ROM) is a group of islands in the South West of the Indian Ocean, consisting of the main island of Mauritius, Rodrigues and several outer islands located at distances greater than 350 km from the main island. As a Small Island Developing State (SIDS), the ROM is particularly vulnerable to the adverse effects of climate change, especially in the coastal zone, where a convergence of accelerating sea level rise and increasing frequency and intensity of tropical cyclones (with more intense rainfall events and stronger winds) will result in considerable economic loss, humanitarian stresses, and environmental degradation.

The visible and measurable effects of climate change in the coastal zone of ROM have become more apparent over the last ten years. There is a direct linkage between climate change effects on coastal ecosystem services (especially coral reefs and lagoons) and the integrity of the whole coastal zone of ROM. As coral reefs lose the race with sea level rise, it is imperative that the critical ecosystem function of wave attenuation be replaced in some manner. Adaptation therefore requires *in situ* changes in behaviour and site management, and appropriate technical interventions, as well as early warning systems that provide enough time for communities to move away from areas where the risk of storm surge and flooding is imminent. Storm surges and swell waves are expected to be aggravated through sea level rise and climate change effects on weather patterns. This will compound underlying trends of increasing coastal erosion and pressure on scarce land resources, and increase physical vulnerability of island populations, infrastructure and livelihood assets.

The Government of Mauritius has secured a grant from the Adaptation Fund for the implementation of the project "Climate Change Adaptation Programme in the Coastal Zone of Mauritius".

This fund, set up under the Kyoto Protocol of the United Nations Framework Convention on Climate Change, is targeted to assist developing-country parties to the above protocol that is particularly vulnerable to the adverse effects of climate change in meeting the costs of concrete adaptation projects.

The expected outcome of the project is to increase climate resilience of communities and their livelihoods in coastal areas of Mauritius.

The outputs of the project are:

- Increased adaptive capacity within relevant development and natural sectors
- Reduced exposure at national level to climate-related hazards and threats
- Strengthened institutional capacity to reduce risks associated with climate induced socio-economic and environmental losses
- Improved policies and regulations that promote and enforce resilience measures
- Effective capturing and dissemination of lessons from the applied activities in the programme.

In view of achieving the above outputs, the following project components shall be implemented:

1. Application of Adaptation measures for coastal protection at three coastal sites: Mon Choisy, Riviere des Galets and Quatre Soeurs;
2. Development of an Early warning system for incoming storm surge;
3. Training;
4. Policy mainstreaming on climate change; and
5. Knowledge dissemination and management.

The total project budget is $9,119, 240 (including the IA fee).

The project was initially designed to be implemented in 5 years (2012 – 2017). Following delays in initial procurement a 1-year extension was approved by AFB following the submission of 2013 Project Performance Report (PPR).

The project is implemented by the Ministry of Environment and Sustainable Development with support from UNDP. Partnerships have also been developed with the Mauritius Meteorological Services and the University of Mauritius in the form of MoUs.

3. OBJECTIVES OF THE MTE

The MTE will assess progress towards the achievement of the project objectives and outcomes as specified in the Project Document, and assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. The MTE will also review the project's strategy, its risks to sustainability.

4. MTE APPROACH & METHODOLOGY

The MTE must provide evidence based information that is credible, reliable and useful. The MTE team will review all relevant sources of information including documents prepared during the preparation phase (i.e. AF Concept, AF Proposal, UNDP Initiation Plan, LPAC Meeting Minutes, UNDP Environmental & Social Safeguard Policy, the Project Document, Inception Report, project reports including Project Performance Reports/PPRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review).

The MTE team is expected to follow a collaborative and participatory approach[xiv] ensuring close engagement with the Project Team, government counterparts, the UNDP Country Office, UNDP-GEF Regional Technical Advisers, and other key stakeholders.

Engagement of stakeholders is vital to a successful MTE.[xv] Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to: executing agencies, senior officials and task team / component leaders, key experts and consultants in the subject area, Project Board, UNDP staff, project stakeholders, academia, local government and CSOs, etc. Additionally, the MTE team is expected to conduct field missions to the 3 project sites: Mon Choisy, Riviere des Galets and Quatre Soeurs/Grand Sable (transport will be organized by the Project Team) as well as **a 1-day mission to Rodrigues (travel and accommodation should be factored in the financial proposal).**

The final MTE report should describe the full MTE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the review.

5. DETAILED SCOPE OF THE MTE

The MTE team will assess the following four categories of project progress.

i. Project Strategy

Project design:

- Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document.
- Review the relevance of the project strategy and assess whether it provides the most effective route towards expected/intended results. Were lessons from other relevant projects properly incorporated into the project design?
- Review how the project addresses country priorities. Review country ownership. Was the project concept in line with the national sector development priorities and plans of the country (or of participating countries in the case of multi-country projects)?
- Review decision-making processes: were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, taken into account during project design processes?
- Review the extent to which relevant gender issues were raised in the project design.
- If there are major areas of concern, recommend areas for improvement.

Results Framework/Logframe:

- Undertake a critical analysis of the project's logframe indicators and targets, assess how "SMART" the midterm and end-of-project targets are (Specific, Measurable, Attainable, Relevant, Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary.
- Are the project's objectives and outcomes or components clear, practical, and feasible within its time frame?
- Examine if progress so far has led to, or could in the future catalyse beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis.
- Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART 'development' indicators, including sex-disaggregated indicators and indicators that capture development benefits.

ii. Progress Towards Results

Progress Towards Outcomes Analysis:

- Review the logframe indicators against progress made towards the end-of-project targets using the Progress Towards Results Matrix; colour code progress in a "traffic light system" based on the level of progress achieved; assign a rating

on progress for each outcome; make recommendations from the areas marked as "Not on target to be achieved" (red).

Table. Progress Towards Results Matrix (Achievement of outcomes against End-of-project Targets)

Project Strategy	Indicator[xvi]	Baseline Level[xvii]	Level in 1st PIR (self-reported)	Midterm Target[xviii]	End-of-project Target	Midterm Level & Assessment[xix]	Achievement Rating[xx]	Justification for Rating
Objective:	Indicator (if applicable):							
Outcome 1:	Indicator 1:							
	Indicator 2:							
Outcome 2:	Indicator 3:							
	Indicator 4:							
	Etc.							
Etc.								

Indicator Assessment Key

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

In addition to the progress towards outcomes analysis:

- Compare and analyse the AF Results Tracker within the PPR at the Baseline with the one completed right before the Midterm Evaluation.
- Identify remaining barriers to achieving the project objective in the remainder of the project.
- By reviewing the aspects of the project that have already been successful, identify ways in which the project can further expand these benefits.

iii. Project Implementation and Adaptive Management

Management Arrangements:

- Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
- Review the quality of execution of the Executing Agency/Implementing Partner(s) and recommend areas for improvement.
- Review the quality of support provided by the AF Partner Agency (UNDP) and recommend areas for improvement.

Work Planning:

- Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.
- Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?
- Examine the use of the project's results framework/ logframe as a management tool and review any changes made to it since project start.

Finance and co-finance:

- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.
- Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?
- Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project? Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans?

Project-level Monitoring and Evaluation Systems:

- Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?
- Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?

Stakeholder Engagement:

- Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?
- Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?
- Participation and public awareness: To what extent has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?

Reporting:

- Assess how adaptive management changes have been reported by the project management and shared with the Project Board.
- Assess how well the Project Team and partners undertake and fulfill AF reporting requirements (i.e. how have they addressed poorly-rated PPRss, if applicable?)
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

Communications:

- Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?
- Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)
- For reporting purposes, write one half-page paragraph that summarizes the project's progress towards results in terms of contribution to sustainable development benefits, as well as global environmental benefits.

iv. Sustainability

- Validate whether the risks identified in the Project Document, PPRs, and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why.
- In addition, assess the following risks to sustainability:

Financial risks to sustainability:

- What is the likelihood of financial and economic resources not being available once the AF assistance ends (consider potential resources can be from multiple sources, such as the public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?

Socio-economic risks to sustainability:

- Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project? Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future?

Institutional Framework and Governance risks to sustainability:

- Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place.

Environmental risks to sustainability:

- Are there any environmental risks that may jeopardize sustenance of project outcomes?

Conclusions & Recommendations

The MTE team will include a section of the report setting out the MTE's evidence-based conclusions, in light of the findings.[xxi]

Recommendations should be succinct suggestions for critical intervention that are specific, measurable, achievable, and relevant. A recommendation table should be put in the report's executive summary.

Rec #	Recommendation	Entity Responsible
A	*(State Outcome 1)* (Outcome 1)	
A.1	**Key recommendation:**	
A.2		
A.3		
B	*(State Outcome 2)* (Outcome 2)	
B.1	**Key recommendation:**	
B.2		
B.3		
C	*(State Outcome 3)* (Outcome 3), etc.	
C.1	**Key recommendation:**	
C.2		
C.3		
D	Project Implementation & Adaptive Management	
D.1	**Key recommendation:**	
D.2		
D.3		
E	Sustainability	
E.1	**Key recommendation:**	
E.2		
E.		

The MTE team should make no more than 15 recommendations total.

Ratings

The MTE team will include its ratings of the project's results and brief descriptions of the associated achievements in a *MTE Ratings & Achievement Summary Table* in the Executive Summary of the MTE report. See Annex E for ratings scales. No rating on Project Strategy and no overall project rating is required.

Table. MTE Ratings & Achievement Summary Table for the Climate Change Adaptation Programme in the coastal zone of Mauritius

Measure	MTR Rating	Achievement Description
Project Strategy	N/A	

Progress Towards Results	Objective Achievement Rating: (rate 6 pt. scale)	
	Outcome 1 Achievement Rating: (rate 6 pt. scale)	
	Outcome 2 Achievement Rating: (rate 6 pt. scale)	
	Outcome 3 Achievement Rating: (rate 6 pt. scale)	
	Etc.	
Project Implementation & Adaptive Management	(rate 6 pt. scale)	
Sustainability	(rate 4 pt. scale)	

6. TIMEFRAME

The total duration of the MTE will be approximately 10 weeks starting 20 October 2014, and shall in no case exceed four months from when the consultant(s) are hired. The tentative MTR timeframe is as follows:

TIMEFRAME	ACTIVITY
12 October	Application closes
19 October	Select MTE Team
20 October	Prep the MTE Team (handover of Project Documents)
21 – 24 October (4 working days)	Document review and preparing MTE Inception Report
27 October	Finalization and Validation of MTE Inception Report - start of MTE mission
27 October – 14 November (15 working days)	MTE mission: stakeholder meetings, interviews, field visits, draft initial findings, draft Result Traker, etc.
13 November	Mission wrap-up meeting & presentation of initial findings - end of MTE mission
17 – 23 November (5 working days)	Preparing draft report
24 November	Submission of draft report to Commissioning Unit
24 November – 10 December	Collection of feedbacks
11 – 14 December (2 working days from Intl consultant only)	Incorporating audit trail from feedback on draft report/Finalization of MTE report
15 December	Submission of final draft MTE report including all comments and annexes
January 2015	Preparation & Issue of Management Response
31 January 2015	Expected date of full MTE completion

Options for site visits should be provided in the Inception Report.

7. MIDTERM EVALUATION DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	**MTE Inception Report**	MTE team clarifies objectives and methods of Midterm Evaluation	Before the MTE mission	MTE team submits to the Commissioning Unit
2	**Presentation**	Initial Findings	End of MTE mission	MTE Team presents to project management and the Commissioning Unit
3	**Draft Final Report**	Full report (using guidelines on	No later than 1 week	Sent to the Commissioning

		content outlined in Annex B) with annexes	after the end of the MTE mission	Unit, reviewed by RTA, Project Coordinating Unit, GEF OFP
4	**Final Report***	Revised report with audit trail detailing how all received comments have (and have not) been addressed in the final MTE report	Within 1 week of receiving stakeholders' comments on draft	Sent to the Commissioning Unit

*The final MTE report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

8. MTE ARRANGEMENTS

The principal responsibility for managing this MTE resides with the Commissioning Unit. The Commissioning Unit for this project's MTE is UNDP Mauritius Country Office.

The commissioning unit will contract the consultants and ensure the timely payment of the consultants based on agreed payment schedule.

The Project Team will be responsible for liaising with the MTE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

9. TEAM COMPOSITION

A team of two independent consultants will conduct the MTE - **one team leader** (with experience and exposure to projects and evaluations in other regions globally) and **one local expert**, from the country of the project. The consultants cannot have participated in the project preparation, formulation, and/or implementation (including the writing of the Project Document) and should not have a conflict of interest with project's related activities.

The selection of the international consultant (team leader) will be based on the following criterias:

- A Master's degree in Environmental Sciences, Project Management, or other relevant field (10 points);
- Work experience in relevant technical areas for at least 7 years (20 points);
- Experience conducting GEF evaluations and/or AF evaluations (10 points);
- Experience working in the Indian Ocean region and SIDS (5 points);
- Project evaluation/review experiences within United Nations system (5 points).

In addition, will be considered assets (up to 10 additional points):

- Recent experience with result-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to Climate Change Adaptation;
- Demonstrated understanding of issues related to gender and Climate Change Adaptation; experience in gender sensitive evaluation and analysis;
- Excellent communication skills;
- Demonstrable analytical skills.

The selection of the national consultant will be based on the following criterias:

- A Master's degree in Environmental Sciences, Project Management, or other relevant field (10 points);
- Work experience in relevant technical areas for at least 5 years (20 points);
- Knowledge of the national institutional and political frameworks associated with Climate Change Adaptation (10 points);
- Experience in project management and/or Monitoring and Evaluation (10 points).

In addition, will be considered assets (up to 10 additional points):

- Recent experience with result-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to Climate Change Adaptation;
- Project evaluation/review experiences within United Nations system;
- Experience conducting GEF evaluations and/or AF evaluations;
- Demonstrated understanding of issues related to gender and Climate Change Adaptation; experience in gender sensitive evaluation and analysis;
- Excellent communication skills;
- Demonstrable analytical skills.

10. PAYMENT MODALITIES AND SPECIFICATIONS

10% of payment upon approval of the final MTE Inception Report
50% upon submission of the draft MTE report
40% upon submission of the final MTE report

11. APPLICATION PROCESS[xxii]

Recommended Presentation of Proposal:

a) **Letter of Confirmation of Interest and Availability** using the template[xxiii] provided by UNDP;
b) **CV** and a **Personal History Form** (P11 form[xxiv]);
c) **Brief description of approach to work/technical proposal** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
d) **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc), supported by a breakdown of costs, as per template attached to the Letter of Confirmation of Interest template. If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All application materials should be submitted by email at the following address ONLY: **jobs.mu@undp.org** by **Monday 13 October 2014, 8:00 am (Mauritius time).** Incomplete applications will be excluded from further consideration.

Criteria for Evaluation of Proposal: Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

ToR ANNEX A: List of Documents to be reviewed by the MTE Team

1. PIF
2. UNDP Initiation Plan
3. UNDP Project Document
4. UNDP Environmental and Social Screening results
5. Project Inception Report
6. All Project Performance Reports (PPR's)
7. Quarterly progress reports and work plans of the various implementation task teams
8. Audit reports
9. Finalized AF Tracking Tools at CEO endorsement and midterm including Result Tracker for Adaptation Fund Projects (http://adaptation-fund.org/sites/default/files/Results%20Framework%20and%20Baseline%20Guidance%20final%20compressed.pdf)
10. Oversight mission reports
11. All monitoring reports prepared by the project
12. Financial and Administration guidelines used by Project Team

The following documents will also be available:

13. Project operational guidelines, manuals and systems
14. UNDP country/countries programme document(s)
15. Minutes of the project Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)
16. Project site location maps

ToR ANNEX B: Guidelines on Contents for the Midterm Evaluation Report[xxv]

i. Basic Report Information *(for opening page or title page)*
- Title of UNDP supported GEF financed project
- UNDP PIMS# and GEF project ID#
- MTE time frame and date of MTE report
- Region and countries included in the project
- GEF Operational Focal Area/Strategic Program
- Executing Agency/Implementing Partner and other project partners
- MTE team members
- Acknowledgements

ii. Table of Contents

iii. Acronyms and Abbreviations

1. Executive Summary *(3-5 pages)*
- Project Information Table
- Project Description (brief)
- Project Progress Summary (between 200-500 words)
- MTE Ratings & Achievement Summary Table
- Concise summary of conclusions
- Recommendation Summary Table

2. Introduction *(2-3 pages)*
- Purpose of the MTE and objectives
- Scope & Methodology: principles of design and execution of the MTE, MTE approach and data collection methods, limitations to the MTE
- Structure of the MTE report

3. Project Description and Background Context *(3-5 pages)*
- Development context: environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope
- Problems that the project sought to address: threats and barriers targeted
- Project Description and Strategy: objective, outcomes and expected results, description of field sites (if any)
- Project Implementation Arrangements: short description of the Project Board, key implementing partner arrangements, etc.
- Project timing and milestones
- Main stakeholders: summary list

4. Findings *(12-14 pages)*

4.1 Project Strategy
- Project Design
- Results Framework/Logframe

4.2 Progress Towards Results
- Progress towards outcomes analysis
- Remaining barriers to achieving the project objective

4.3 Project Implementation and Adaptive Management
- Management Arrangements
- Work planning
- Finance and co-finance
- Project-level monitoring and evaluation systems
- Stakeholder engagement
- Reporting
- Communications

4.4 Sustainability
- Financial risks to sustainability
- Socio-economic to sustainability
- Institutional framework and governance risks to sustainability
- Environmental risks to sustainability

5. Conclusions and Recommendations *(4-6 pages)*

Conclusions

5.1
- Comprehensive and balanced statements (that are evidence-based and connected to the MTE's findings) which highlight the strengths, weaknesses and results of the project

Recommendations

5.2

- Corrective actions for the design, implementation, monitoring and evaluation of the project
- Actions to follow up or reinforce initial benefits from the project
- Proposals for future directions underlining main objectives

6. Annexes

- MTE ToR (excluding ToR annexes)
- MTE evaluative matrix (evaluation criteria with key questions, indicators, sources of data, and methodology)
- Example Questionnaire or Interview Guide used for data collection
- Ratings Scales
- MTE mission itinerary
- List of persons interviewed
- List of documents reviewed
- Co-financing table (if not previously included in the body of the report)
- Signed UNEG Code of Conduct form
- Signed MTE final report clearance form
- *Annexed in a separate file:* Audit trail from received comments on draft MTE report
- *Annexed in a separate file:* Relevant midterm tracking tools (Result Tracker, etc.)

ToR ANNEX C: Midterm Evaluation Evaluative Matrix Template

Evaluative Questions	Indicators	Sources	Methodology
Project Strategy: To what extent is the project strategy relevant to country priorities, country ownership, and the best route towards expected results?			
(include evaluative question(s))	(i.e. relationships established, level of coherence between project design and implementation approach, specific activities conducted, quality of risk mitigation strategies, etc.)	(i.e. project documents, national policies or strategies, websites, project staff, project partners, data collected throughout the MTE mission, etc.)	(i.e. document analysis, data analysis, interviews with project staff, interviews with stakeholders, etc.)
Progress Towards Results: To what extent have the expected outcomes and objectives of the project been achieved thus far?			
Project Implementation and Adaptive Management: Has the project been implemented efficiently, cost-effectively, and been able to adapt to any changing conditions thus far? To what extent are project-level monitoring and evaluation systems, reporting, and project communications supporting the project's implementation?			
Sustainability: To what extent are there financial, institutional, socio-economic, and/or environmental risks to sustaining long-term project results?			

UNEG Code of Conduct for Evaluators/Midterm Evaluation Consultants[xxvi]

Evaluators/Consultants:

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

MTE Consultant Agreement Form

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

Name of Consultant: _____Stephani Jill Hodge _____

Name of Consultancy Organization (where relevant): _____Self _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at _____*New York (Place)* on _____*October 26 2014 (Date)*

Signature: _____sjh –electronic signature _____

ANNEX 4 - LIST OF ALL PERSONS AND DESIGNATION INTERVIEWED DURING MISSION

THE PROJECT TEAM AND LOCAL CONSULTANT MUST COMPILE THESE

ANNEX 5 – MISSION PROGRAMME

LOCAL CONSULTANT CAN SEND THE FINAL INCEPTION REPRT AND ATTACH THIS PROGRAMME

ToR ANNEX E: MTE Ratings

Ratings for Progress Towards Results: (one rating for each outcome and for the objective)		
6	Highly Satisfactory (HS)	The objective/outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as "good practice".
5	Satisfactory (S)	The objective/outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.
4	Moderately Satisfactory (MS)	The objective/outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.
3	Moderately Unsatisfactory (HU)	The objective/outcome is expected to achieve its end-of-project targets with major shortcomings.
2	Unsatisfactory (U)	The objective/outcome is expected not to achieve most of its end-of-project targets.
1	Highly Unsatisfactory (HU)	The objective/outcome has failed to achieve its midterm targets, and is not expected to achieve any of its end-of-project targets.

Ratings for Project Implementation & Adaptive Management: (one overall rating)		
6	Highly Satisfactory (HS)	Implementation of all seven components – management arrangements, work planning, finance and co-finance, project-level monitoring and evaluation systems, stakeholder engagement, reporting, and communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented as "good practice".
5	Satisfactory (S)	Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.
4	Moderately Satisfactory (MS)	Implementation of some of the seven components is leading to efficient and effective project implementation and adaptive management, with some components requiring remedial action.
3	Moderately Unsatisfactory (MU)	Implementation of some of the seven components is not leading to efficient and effective project implementation and adaptive, with most components requiring remedial action.
2	Unsatisfactory (U)	Implementation of most of the seven components is not leading to efficient and effective project implementation and adaptive management.
1	Highly Unsatisfactory (HU)	Implementation of none of the seven components is leading to efficient and effective project implementation and adaptive management.

Ratings for Sustainability: (one overall rating)		
4	Likely (L)	Negligible risks to sustainability, with key outcomes on track to be achieved by the project's closure and expected to continue into the foreseeable future

3	Moderately Likely (ML)	Moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Midterm Evaluation
2	Moderately Unlikely (MU)	Significant risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on
1	Unlikely (U)	Severe risks that project outcomes as well as key outputs will not be sustained

ToR ANNEX F: MTE Report Clearance Form

(to be completed by the Commissioning Unit and UNDP-GEF RTA and included in the final document)

Midterm Evaluation Report Reviewed and Cleared By:
Commissioning Unit
Name: _____
Signature: _____ Date: _____
UNDP-GEF Regional Technical Advisor
Name: _____
Signature: _____ Date: _____

[i] MMS. 2008. Technical Report CS28. Cyclone Season of the Southwest Indian Ocean, 2006-2007.

[iiii] Note that the First National Communication also included climate change impacts on agriculture, water resources, fisheries, health and well-being, land-use change and forestry, and biodiversity. These are not addressed in this proposal.

[iii] Mauritius Meteorological Services (MMS): Climate change impacts on Mauritius. 2008.

[iv] MMS, 2008 and 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.

[v] Mauritius Meteorological Services: Climate change impacts on Mauritius. 2008.

[vi] MMS, 2008 and Lal, M., Harasawa, H., Takahashi, K. 2002. Future climate change and its impacts over Small Island Developing States. *Climate Research* **19**: 179 – 192.

[vii] Unpublished data in the draft Second National Communication.

[viii] the initial project intent was to put the community at the centre of the project approach; that the project focus on global leadership in adaptation and climate change policy innovation; that the formulation of the log frame with priority to good planning and procurement/transparency and being results focused; that the focus would be on smooth implementation and performance; that the stakeholder participation and beneficiaries' ownership of the project, is good, yet with precise analysis is required; that efficiency of administrative, financial, and accounting procedures under NIM; that planning of scientific related activities that lack tangible deliverables although their contribution clearly adds value; that a monitoring and evaluation system is being set up; that the sustainability of the capacity building needs to be enhanced; quality of human resources recruited to start the project and whether this can be significant to achieve project

objectives; to fully take into account the changing *socio-cultural intervention context and implementation modalities in order to set realistic* objectives; that the project implementation would be an approach through the "faire faire" and whether this requires a functional mechanism to monitor partner interventions so as to introduce timely corrective measures; it also takes some patience to negotiate and start the protocols; That the involvement of line *Technical Departments in the supervision and technical monitoring* of project activities which will contribute to improving project performance and are a token for sustaining achievements; that concerns procurement of goods and services, the combined use of AF procedures and those of national entities requires strengthening the quality of monitoring files to avoid any counter-performance; The achievements since the inception report meeting must be documented by the MTE.

[ix] A feedback survey on the impact of the training is also conducted upon completion of the training program. PM suggested to take note that the invitation to the attendees of the courses are tendered to the CEO of the respective institutions who ultimately appoints the most appropriate staff.

[x] PO at UNDP agreed the UNDP process took a long time but mainly in terms of improving the RFP document for this very complex piece of consultancy which was definitely not lost time. MTE learned that if procurement had been done by MOESD it would probably have been even lengthier because of challenges raised by bidders which is not a problem for UNDP. This being said I agree that recourse to UNDP should be only for exceptionally complex pieces of consultancies with risks of challenges.

[xi] See minutes of private sector consultation meeting, which confirms that this is in line with views from the private sector, point 3.iii. Demonstration is important to promote replication.

[xii] PO suggested that it is worth mentioning that project team and UNDP have foreseen that and 1-year extension has already been requested and granted i.e. the MTE is not conducted at midterm but 2.5 years into a 6 years project.

[xiii] In this project, the technical company awarded the contract to do CBA and develop baseline values for action will provide recommendations on strengthening the monitoring system for coastal zone adaptation, including consideration of the inclusion and provided sector, CBO and partnerships, and financial input of government to enable a result.

[xiv] For ideas on innovative and participatory Monitoring and Evaluation strategies and techniques, see UNDP Discussion Paper: Innovations in Monitoring & Evaluating Results, 05 Nov 2013.

[xv] For more stakeholder engagement in the M&E process, see the UNDP Handbook on Planning, Monitoring and Evaluating for Development Results, Chapter 3, pg. 93.

[xvi] Populate with data from the Logframe and scorecards

[xvii] Populate with data from the Project Document

[xviii] If available

[xix] Colour code this column only

[xx] Use the 6 point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

[xxi] Alternatively, MTE conclusions may be integrated into the body of the report.

[xxii] Engagement of the consultants should be done in line with guidelines for hiring consultants in the POPP: https://info.undp.org/global/popp/Pages/default.aspx

[xxiii] https://intranet.undp.org/unit/bom/pso/Support%20documents%20on%20IC%20Guidelines/Template%20for%20Confirmation%20of%20Interest%20and%20Submission%20of%20Financial%20Proposal.docx

[xxiv] http://www.undp.org/content/dam/undp/library/corporate/Careers/P11_Personal_history_form.doc

[xxv] The Report length should not exceed **40 pages** in total (not including annexes).

[xxvi] www.undp.org/unegcodeofconduct