



**PROJECT IDENTIFICATION FORM**

**Project Type:** Full Size Project

**Type of Trust Fund:** LDCF

**PART I: PROJECT IDENTIFICATION**

Project Title:	Adaptation to Climate Change in the Coastal Zone in Vanuatu		
County (ies):	Vanuatu	GEF Project ID:	5049
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4866
Other Executing Partner(s)	Department of Environmental Protection & Conservation	Submission Date:	July 30, 2012
		Resubmission Date:	October 12, 2012
GEF Focal Area(s):	Climate Change	Project Duration (Months)	48
Name of parent programme (if applicable):	Not Applicable	Agency Fee (\$)	803,000

**A. FOCAL AREA STRATEGY FRAMEWORK**

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount	Indicative Co-financing
CCA-1: Reduce vulnerability to the adverse impacts of CC, including variability, at local, national, regional and global levels	1.1 Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas	1.1.1 Adaptation measures and necessary budget allocations included in relevant frameworks	LDCF	350,000	858,000
	1.2 Reduced vulnerability in development sectors	1.2.1 Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability	LDCF	4,850,000	23,880,217
CCA-2: Increase adaptive capacity to respond to the impacts of CC, including variability, at local, national, regional and global levels	2.1 Increased knowledge and understanding of climate vulnerability and change – induced risks at country level and in targeted vulnerable areas	2.1.1 Risk and vulnerability assessments conducted and updated	LDCF	200,000	1,100,000
	2.2 Strengthened adaptive capacity to reduce risks to climate-induced economic losses	2.2.2 Targeted population groups covered by adequate risk reduction measures	LDCF	1,850,000	5,240,000
	2.3 Strengthened awareness and ownership adaptation and climate risk reduction processes at local level	2.3.1 Targeted population groups participating in adaptation and risk reduction awareness activities		400,000	230,000
		<b>Sub-Total</b>		<b>7,650,000</b>	<b>31,308,217</b>
		<b>Project Management Cost</b>	<b>LDCF</b>	<b>380,000</b>	<b>3,123,000</b>
		<b>Total</b>		<b>8,030,000</b>	<b>34,431,217</b>

## B. PROJECT FRAMEWORK

<b>Project Objective:</b> To improve the resilience of the coastal zone to the impacts of climate change in order to sustain livelihoods, food production and preserve and improve the quality of life in targeted vulnerable areas						
<b>Project Component</b>	<b>Grant Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>Indicative Grant Amount (\$)</b>	<b>Indicative Co-financing (\$)</b>
1. Integrated Community Approaches to CC Adaptation	INV	<p>1.1. Integrated CC-A plans mainstreamed in the coastal zone</p> <p>1.2 Improved climate resilience of coastal areas through integrated approaches</p>	<p>1.1.1 CC adaptation plans, including risk management, preparedness and response plans, formulated in the context of ICM and in relation to assessed site-specific vulnerabilities, subsequently adopted and mainstreamed in planning processes for at least 6 priority vulnerable coastal communities</p> <p>1.2.1 Threatened coastal ecosystems and resources such as mangroves, coral reefs, and fisheries rehabilitated to support livelihoods and food production and increase climate resilience</p> <p>1.2.2 Coastal areas stabilized through re-vegetation and other ‘soft’ approaches to complement ‘hard’ measures</p> <p>1.2.3 Improved resilience through climate proofing of selected public conveyance infrastructure (roads, bridges, etc. implemented by the Public Works Department) in the coastal zone in at least 6 priority vulnerable coastal communities</p>	<b>LDCF</b>	<b>6,000,000</b>	<b>28,830,217</b>
2. Information and early warning systems on coastal hazards	INV	2.1 Reduced exposure to flood-related risks and hazards in the target coastal communities	<p>2.1.1 Automated system for real time monitoring of climate-related hazards such as coastal flooding, storm surges, sea-level rise designed, installed and maintained; trends in these climate impacts analyzed over time</p> <p>2.1.2 Timely release of early warnings against coastal flooding and storm surges through various public media, e.g., radio, internet, TV through applicable public-private partnerships with e.g., with Digicell; TVL – Telecom Vanuatu Ltd; commercial radio and TV stations</p> <p>2.1.3 Capacity of 18 VMGD staff in the operation and maintenance of AWS and in the analysis of data strengthened</p>	<b>LDCF</b>	<b>1,000,000</b>	<b>1,090,000</b>

3. Climate Change Governance	TA	<p>3.1 Climate change adaptation enabling policies and supportive institutions in place</p> <p>3.2 Human resources in place at the national, provincial and community levels</p>	<p>3.1.1 Legislation and national/sector policies with impacts on climate change adaptation reviewed and a policy reform agenda developed and implemented (e.g., finalization of draft National CC Policy; incorporation of CC into the EIA Policy, and sector policies in forestry, coastal fisheries, agriculture, water and sanitation; localization of existing policies)</p> <p>3.2.1 Capacity building of key national and provincial government agencies (DEPC, PWD, Department of Internal Affairs, Departments of Fisheries, Forestry, Water) in areas of compliance and enforcement, monitoring and evaluation and mainstreaming of climate-related policies and regulations</p> <p>3.2.2 Communities empowered to deal with climate change impacts in the coastal zone through participatory approaches in vulnerability assessments, planning and community-based adaptation measures and capacity building</p>	<b>LDCF</b>	<b>350,000</b>	<b>908,000</b>
4. Knowledge management	TA	<p>4.1. Increased awareness and ownership of climate risk reduction processes at the national and local levels.</p>	<p>4.1.1 Best practices are captured, documented, and distributed to all local and national stakeholders and shared globally in appropriate mechanisms (development, populating and maintenance of national website for CC) through the NAB (National Advisory Board)</p> <p>4.1.2 Awareness, training and education programmes developed and implemented for e.g. schools, households and the private sector; translated into Bislama and French as applicable and working with ongoing initiatives</p>	<b>LDCF</b>	<b>300,000</b>	<b>480,000</b>
Sub-Total					<b>7,650,000</b>	<b>31,308,217</b>
Project Management Cost				<b>LDCF</b>	<b>380,000</b>	<b>3,123,000</b>
<b>Total Project Cost</b>					<b>8,030,000</b>	<b>34,431,217</b>

**C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE (\$)**

Sources of Co-financing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	Public Works Department (PWD)	In-kind	10,000,000
	Department of Environmental Protection and Conservation (DEPC)	In-kind	250,000
	Vanuatu Meteorological and Geo-hazards Department (VMGD)	In-kind	840,000
Local Government	Provincial government and communities	In-kind	2,000,000
GEF Agency	UNDP	In-kind	2,447,217
Other Multilateral Agenc(ies)	Australian Agency for International Development	Grant	18,400,000
	Japan International Cooperation Agency	Grant	300,000
CSO	Vanuatu Association of NGOs (VANGO)	In-kind	194,000
<b>Total Co-financing</b>			<b>34,431,217</b>

**D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY**

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b)	Total c=a+b
UNDP	LDCF	Climate Change	Vanuatu	8,030,000	803,000	8,833,000

**PART II: PROJECT JUSTIFICATION**

**A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:**

A.1.1 the GEF focal area/LDCF/SCCF strategies:

The project is aligned (refer to Table A in Part I) with LDCF/SCCF focal area objective CCA-1 “Reduce vulnerability to the adverse impacts of climate change, including variability at local, national regional and global level” and objective CCA-2 “Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level”. The project will enhance adaptive capacity at the national level in terms of mainstreaming climate change considerations into relevant legislation and policy frameworks (outcome 3.1). At the local level, adaptive capacity will be promoted through the development of CC-adaptation and risk management and disaster preparedness plans (output 1.1.1) through participatory planning and management of the project. Vulnerable physical, natural and social assets will be protected by rehabilitating coastal ecosystems such as mangroves and by climate proofing important coastal infrastructure (outcome 1.2). With regard to CCA-2, awareness raising/training for various stakeholders and participatory approaches to climate change adaptation (outcomes 3.1, 3.2 and 4.1) will strengthen national, provincial and community ownership of the project and encourage broad engagement in adaptation activities and risk reduction processes. The installation of an early warning system and capacity building of national/provincial agencies involved in disaster risk management (outcome 2.1) will further reduce vulnerability in target communities and enhance adaptive capacity nationally.

A.1.2 For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities

Vanuatu ratified the UN Framework Convention on Climate Change (UNFCCC) in March 1993 and the Kyoto Protocol in July 2001. Its National Adaption Programme of Action (NAPA) was submitted to the UNFCCC in December 2007. Climate change will significantly reduce the capacity of Vanuatu to pursue a sustainable development and achieve the Millennium Development Goals. In consistency with the LDCF eligibility criteria, the

project supports the implementation of some of the most immediate adaptation priorities identified in Vanuatu's NAPA. The project recognizes that adaptation and development are closely linked which is why the project adopts a programmatic approach and addresses adaptation in relation to other interlinked human induced stressors reducing climate resilience. A participatory approach will be used to enhance local ownership, promote public awareness, and capacity building. The proposal has been prepared with the full involvement of relevant stakeholders.

- A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e., NAPAs, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The project will explicitly address three of eleven priorities identified in the NAPA. These are: 1) community based marine resources management; 2) ICM; and 3) mainstreaming climate change into policy and national planning. The NAPA places particular emphasis on the need for community based marine resource management, embracing both traditional and modern practices, in enhancing the resilience of vulnerable coastal communities. To address the above three priorities, the project will target a number of adaptation options outlined in the NAPA, for example, the development of provincial/local adaptation and ICM plans, climate proofing of infrastructure design and development planning, the development of an efficient early warning system, awareness raising and capacity building, and coastal re-vegetation and rehabilitation. Such adaptation activities will also help to promote food security in Vanuatu, which in the NAPA is defined as an overarching goal of all adaptation activities. The project adopts a cross-sector and participatory approach to promote action and learning at multiple levels. This approach will also be important to account for interaction between human activities, ecosystems, and biophysical processes.

The project is consistent with the overarching development framework for Vanuatu—the Priority Action Agenda (PAA)—which recognizes the need for accurate forewarning of climate-related disasters and improved coordination of national disaster management and climate change adaptation to prevent, respond to, and recover from climate-related disasters. The project also aligns with and promotes the implementation of the National Integrated Coastal Management Framework (NICMF) that has been developed to assist responsible national agencies and other concerned stakeholders to coordinated their activities to improve management of the coastal zone and strengthen the resilience of coastal communities.

## **B. PROJECT OVERVIEW**

- B.1. Describe the baseline project and problem that it seeks to address

**Development context:** Vanuatu comprises over 80 islands, of which 68 are inhabited, and has a population of around 234 000 people. It has a combined land area of 14,760 km<sup>2</sup> and a maritime exclusive economic zone of 680,000 km<sup>2</sup>. The country experiences severe tropical cyclones during the summer months of December to February, anomalously long dry spells associated with the El Nino-Southern Oscillation (ENSO), and frequent earthquakes and seismic activity due to its location along the “Pacific Ring of Fire”. According to the Commonwealth Vulnerability Index,<sup>1</sup> Vanuatu ranks as the world's most vulnerable country due to its high exposure to natural disasters, scattered island geography, narrow economic base, inadequate communication and transportation networks, and limited capacity to cope with disasters including climate change.

Like all small island nations, the coastal zone is the hub of economic activities in Vanuatu. The vast majority of the population is concentrated in the narrow strip of the coastal zone as most islands are volcanic with a mountainous terrain in the interior of most islands. About 80% live in rural areas and engage in subsistence, rain-fed agriculture on coastal plains; valuable arable land is located within the coastal zone. Coastal fisheries contribute significantly to food security, and the recent agriculture census indicates an increased fishing effort by many rural communities. Yet many life-supporting coastal ecosystems are increasingly under stress from climate change and other human-induced activities. The geography of Vanuatu also creates significant challenges to infrastructure development and the provision of basic social services, such as healthcare, education and early warning.

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<sup>1</sup> Based on: (a) the impact of external shocks over which an affected country has little or no control and (b) the resilience of a country to withstand and recover from such shocks.

Most rural villagers' regular communication comes through public radio broadcasts. Telephone communications are concentrated in most large islands, and in many small islands there may be only 2 or 3 telephone sets serving the entire population. As most infrastructures (e.g. roads, buildings, power plants, industries, markets, and tourism facilities) are located in the coastal zone, climate change will severely endanger economic activity, the provision of social services, and human security. The impact would be more felt in smaller islands which often have inadequate access to infrastructure.

**Climate change context.** The probabilities of climate-related risks<sup>2</sup> related to high sea levels, extreme daily rainfall events, extreme winds and extreme air and water temperatures have been evaluated for Vanuatu. Best estimates of long term, systematic changes in the average climate indicate that by 2050 sea level is likely to have increased by 20 cm, maximum air temperatures by 0.2°C, maximum water temperatures by 0.19°C, extreme wind gusts by 6.8% and rainfall by 0.6%. The long-term trend in sea level rise projected at 5 mm/year is greater than the estimated range of global sea-level rise of 1-2 mm/year. The report conveys two key projections: (i) increased occurrences of extreme high sea levels, air/water temperatures and damaging winds are highly likely in the coming decades; and (ii) there is less certainty regarding changes in the frequency of intense daily precipitation events, but there are indications that the frequency of these events will also increase in the future.

A greater proportion of rain will fall in association with cyclones or prolonged rainfalls during the wet season, but higher temperatures will also lead to more pronounced dry seasons and increased evaporation. Such changes would decrease agricultural productivity, accelerate coastal erosion, and affect the quality and availability of drinking water. Higher ocean surface temperatures will lead to severe coral bleaching and affect the reproductive potential of corals and reef fish species. It may also create conditions favorable for algal blooms and increase the severity of ciguatera fish poisoning. Furthermore, sea-level rise may cause salt-water intrusion into the shallow ground water lens and increasingly lead to diminution of lowland areas. Changed weather patterns are likely to increase the incidence of malaria and other infectious water borne diseases.

Historical events appear to support the preceding projections. Vanuatu is one of the most vulnerable island countries in the Pacific that is subjected to extreme climate events such as cyclones, floods and droughts almost annually. In particular, cyclones have been a major threat averaging 2 to 3 events per season. For the Pacific region, the highest concentration of cyclone occurs in the area of Vanuatu as it is precisely in the cyclone path, experiencing cyclonic activities nearly every year. For the past decade, some major cyclones include: Uma in 1987; Betsy in 1992; Prema in 1993; Dani in 1999; Sosé in 2001; and Ivy in 2004 (where winds intensified to hurricane force strength, 80 knots and gusting to over 100 knots).

The impacts of climate change described above have serious consequences on the coastal environment in Vanuatu. The bio-geophysical effects include coastal erosion, increased flooding, loss of coastal lowlands and wetlands and salinization of surface and groundwater. The loss and degradation of coastal wetlands impact on the livelihoods and nutrition of coastal dwellers that depend on the ecosystem services from intact and healthy mangroves, coral reefs and other coastal habitats. In addition, the effects on the socio-economy of the country include the risks to human life and health, loss of property and infrastructure, deterioration of agriculture, tourism and recreation and loss of livelihoods. All these threaten the way of life of coastal communities that have strong affinity to coastal ecosystems for economic, social and sometimes spiritual purposes.

The costs of climate change impacts have been quite high. If more cyclones follow the path that Uma took in 1987 and Ivy in February 2004, then the livelihood of the people of Vanuatu as well as the larger economic development of the country will be rendered to a halt as majority of government's efforts will be solicited towards recovery rather than development. Both cyclones affected nearly 100,000 people and caused destruction in the hundreds of million US\$. The study by SOPAC<sup>3</sup> estimated that the average annual loss from tropical cyclones is about US\$ 37 million in terms of damages to buildings and other infrastructure and to agriculture, which is a major sector of the economy. It is

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<sup>2</sup> Report prepared by John E. Hay and Associates Ltd, New Zealand, August 2008.

<sup>3</sup> This is a more recent report is by SOPAC for the Pacific Catastrophe Risk Assessment and Financing Initiative in September 2011, which covered earthquakes and tropical cyclones.

expected that most of these will occur in the coastal zone where the concentration of infrastructure is highest as with farming and related activities. These direct losses from tropical cyclones are caused by wind and flooding due to rain and storm surges, all of which are climate-induced.

**Governance context.** Vanuatu has responded positively to the climate change challenges. The National Advisory Committee on Climate Change (NACCC), a multi-disciplinary and inter-agency body that draws its membership from different government agencies, has the main responsibility to coordinate climate change programmes, projects and activities in Vanuatu. This has been recently replaced by the National Advisory Board (NAB) which is a strengthened governance structure over CC adaptation, DRM and DRR initiatives in the country. The secretariat of NAB is the newly established PMU (Project Management Unit) based at VMGD. The PMU has now recruited three professional staff for the PMU office with the coordinating role over CCA, DRR/DRM programmes implemented by NGOs, CBOs, government agencies and multilateral and bilateral agencies. These changes have been formalized and endorsed by the government in August this year 2012. Among other functions, the NAB will;

- Facilitate the different interests among the government and NGOs working in the areas of CCA, DRR/DRM issues in country that could lead overlapping in project activities resulting in teething issues in the implementation of projects;
- Mainstream CCA, DRR/DRM into sectoral programmes which can be integrated into national programmes in the long term to avoid coordination issues of such programmes; and
- Address lack of capacity (human and other resources) to implement CCA, DRR/DRM programmes at sectoral level.

A first major step for the NAB is the convening of a consortium of government agencies and non-government organizations and donors within the year to lay out operational guidelines to carry out its functions.

There is a relatively high degree of commitment across Vanuatu's 12 ministries to integrate climate change issues into national planning documents and sector plans, but there is a significant challenge in collaboration across ministries and sectors, allocation of budget for climate change adaptation, and implementation of cross-sector agreements. To guide the implementation of efficient adaptation activities, Vanuatu has endorsed a National Climate Change Adaptation Strategy (NCCAS) for the period 2012-2022. The plan provides policy recommendations by outlining sector specific adaptation plans and a systematic, long-term approach for embedding climate change adaptation into core national and sector activities.

Vanuatu finalized in 2010 a National Integrated Coastal Management Framework (NICMF) and Implementation Strategy with a vision towards a 'clean and healthy coastal and marine environment for current and future generations...'. It prescribes institutional arrangements needed for management of coastal ecosystems to achieve the vision. Most importantly, it recognizes the opportunities of ICM for planning of responses to manage the impacts of climate change. From a policy standpoint, the NICMF should be complemented by similar efforts to strengthen the climate responsiveness of other legislation, including the *Environmental Management and Conservation Act 2002*, *National Disaster Act 2000*, *Forestry Act 2001*, *Fisheries Act 2005*, *National Parks Act 1993*, and the *Water Resource Management Act 2002*.

At all levels of government, there is minimal understanding of climate change and its impacts on coastal ecosystems and few resources to implement new policy. Moreover, lack of coordination between government agencies, provincial authorities, and rural communities hinders climate change adaptation and knowledge exchange. Technical support, education and training is therefore required to further mainstream climate change into legal frameworks and sector plans as well as to equip decision makers, planners, coastal managers, and communities with the best knowledge, skills, and motivation to address climate change adaptation.

The description of the general context in the preceding section clearly indicates that while Vanuatu has taken decisive steps at the governance level to address the impacts of climate change, there remain serious gaps for the country to effectively increase resilience in the coastal zone. The proposed project is described below focusing on the proposed 4 components. Further context and specific baseline for each component are also discussed below.

**Project approach.** Climate change adaptation is hindered by a number of factors, for example, lack of finance, technology, and coordination between government agencies, provincial authorities, and local communities. The

majority of the population, including decision makers, also has minimal understanding of climate change and its impacts. To date climate change adaptation has to compete with other development priorities such as education, health care, private sector development, and employment creation. This emphasizes the importance of mainstreaming climate change concerns into key development sectors to avoid trade-offs between different development priorities. To address climate change and increase the resilience of vulnerable coastal areas, the project is focused on implementing community-level actions and establishing wider level enabling mechanisms at the provincial and national levels. Specifically, the project will:

- a) Improve the adaptive capacity of communities to climate change impacts through integrated approaches and community actions in the restoration of productive coastal ecosystems and implementation of applicable concrete adaptation measures;
- b) Reduce exposure of coastal dwellers to climate hazards and risks through the installation and maintenance of an early warning system;
- c) Improve climate-related governance at the national, provincial and village levels to ensure sustainability and replication of successful climate change adaptation measures; and
- d) Increase awareness about climate change perils in general and adaptation in the coastal zone in particular, to increase resilience of the general population to climate change impacts.

All these are envisioned to sustain food production and livelihoods from coastal resources, protect economic assets and vital public infrastructure and ultimately preserve the way of life among coastal communities.

*Integrated Coastal Management (ICM) as Framework for Climate Change Adaptation and Disaster Risk Reduction and Management.* It has been recognized even in the IPCC Third Assessment Report that reactive and stand-alone efforts to reduce climate-related risks to coastal systems are less effective than responses which are part of integrated coastal zone management (or ICM) and in the wider context of long-term national and community planning. This is due to the fact that it is usually in populated mega deltas and low-lying coastal urban areas where the stresses on natural systems coincide with low human adaptive capacity and high exposure to climate-related risks. This also applies to the geopolitical and socioeconomic situation in Vanuatu whereby the narrow coastal zone is the most vulnerable to climate change impacts. The Fourth Assessment Report (AR4) also recognizes that enhancing adaptive capacity to climate change is an important part of ICM where responses to climate variability and extreme events are implemented in the broader context and the wider objectives of coastal planning and development.

As mentioned above, the Vanuatu NICMF and its Implementation Strategy has adopted ICM as the appropriate approach to tackling the impacts of CC. The generic ICM steps outlined below are supported by the NICMF.

Considering the vulnerability of the coastal zone to climate change impacts, a number of bilateral and multilateral organizations have supported coastal countries and communities to implement ICM-based adaptation strategies. A useful reference which underpins the framework for this proposed project is the publication, “Adapting to Coastal Climate Change: A Guidebook for Development Planners<sup>4</sup>”. The Guidebook proposes a number of steps for assessing vulnerability to climate change and variability, developing and implementing adaptation options, and integrating options into programmes, development plans, and projects at the national and local levels. The steps are summarized below:

Step 1: Assess Vulnerability. This focuses on gaining an understanding of how climate variability and change will impact coastal communities, the goods and services provided by natural resources and human-built infrastructure. In addition, the current capacity of coastal communities and ecosystems to adapt to and cope with climate impacts will be assessed.

Step 2: Select a Course of Action. This will involve the identification of adaptation goals and assessment of individual adaptation measures or measures bundled into a strategy. Goals could include the following: maintain functioning and

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<sup>4</sup> This publication came out in May 2009 and was prepared it was prepared by the Coastal Resources Center–University of Rhode Island and International Resources Group with support from the United States Agency for International Development. The approach is culled from the inputs of practitioners from around the world building on their experiences in implementing related activities.



healthy ecosystems; reduce exposure and vulnerability of the built environment; strengthen governance frameworks for coastal adaptation; maintain livelihood opportunities and diversity options; etc.

Step 3: Mainstream Coastal Adaptation. This means that climate concerns and adaptation responses are integrated into relevant development policies, plans, programmes, and projects at all geopolitical scales. This will ensure ownership by those responsible for preparing and implementing the ICM-based CC adaptation plans.

Step 4: Implement Adaptation. Even with the preceding steps undertaken properly, there will be challenges in the implementation which include inadequate capabilities, lack of financing to sustain adaptation, weak legal frameworks and enforcement, information gaps, poor technical effectiveness of CC adaptation measures, among others. These challenges will have to be expected and addressed effectively during implementation.

Step 5: Evaluate for Adaptive Management. This is in recognition of the ongoing and iterative process of adaptation whereby the strategy will benefit from periodic evaluation of performance coupled with an adaptive management process to fine-tune implementation.

## **The Proposed Project**

*Component 1: Integrated community approaches to climate change adaptation:* Some of the major environmental problems facing Vanuatu are land degradation, biodiversity loss, and reef destruction. These problems severely undermine prospects for sustainable development, including food security, which situation underscores the need for immediate action. Clearing of mangrove forests, coastal exploitation and sand mining also increase the vulnerability of important infrastructure by accelerating erosion and eliminating the natural buffer zone against storm surges and sea level rise. In many sites infrastructure needs immediate maintenance and climate proofing to withstand climate-induced cyclones, floods, sea level rise, and high intensity rainfall. General road maintenance is often lacking as a result of inadequate resources, in terms of equipment, labor and materials, and budget allocations. The maintenance of coastal roads is particularly important as those are often the only means by which coastal communities can evacuate and emergency relief provided during times of natural disasters such as cyclones, earthquakes and tsunamis.

Associated with all infrastructure improvements and development is the need to encourage re-vegetation, in all areas of bare or disturbed ground, as this will mitigate soil loss, improve the stability of the ground, and provide enhance general ecosystem resilience. Mangrove forests, pandanas and vitiver grass have a good effect in this regard. Their primary function of stabilizing the soil results in erosion reduction and protection of adjacent roads and river crossings provided these are planted strategically. Specifically for mangrove forests, these moderate storm surges and serve to protect inland areas including public and private infrastructure. There is thus a complementarity between hard and soft climate-proofing measures in a mutually re-enforcing manner, as may be appropriate in specific locations. Coastal re-vegetation and other soft approaches will improve the effectiveness of hard approaches in climate proofing coastal infrastructure in the long-run. It also follows that each approach may be undertaken separately as may be appropriate from design and cost considerations. These are being implemented respectively in Vanuatu by PWD and by NGOs and CBOs.

Re-vegetation also provides additional co-benefits in terms of enhanced food security and income earning opportunities for coastal communities. The rehabilitation of degraded coastal ecosystems primarily mangrove forests, seagrass beds, coral reefs and pandanas will improve their fisheries productivity that are essential for the livelihoods of coastal communities, which in turn promotes stronger adaptation at the household level and therefore their resilience to any impact, climate-related or not.

There are several adaptation initiatives that are being undertaken in the country but these are focused primarily on specific adaptation measures in isolation with the wider biophysical and socioeconomic environment of the locality. Enhanced coordination between coastal management/planning, community-based management, and climate change adaptation is required. For example, CC adaptation plans will have to focus on the vulnerabilities of entire coastal areas to climate-related impacts as well as to other human induced stressors on the natural and human environment. As emphasized in the NAPA, there is a need to establish provincial ICM/adaptation plans to improve management, climate change understanding, and adaptive capacity.

In this component, the project will start with the assessment of vulnerabilities for each site followed by the participatory formulation of CC-A plans for the targeted vulnerable communities based on ICM. The CC-A plans will incorporate risk management, preparedness and response plans associated with climate-induced flooding and will be implemented and mainstreamed in the planning processes at the appropriate geopolitical level. Priority adaptation measures will be implemented, including soft and hard approaches, including protection and climate proofing of selected coastal infrastructure.

The primary baseline for this component is the Vanuatu Transport Sector Strengthening Programme (VTSSP) that was started in 2009. It is a long-term partnership (covering 15 years) between the governments of Vanuatu and Australia aiming to improve the standard and maintenance of the Vanuatu road network. The first phase with a budget of AU\$18.9 million commenced in September 2009 and will end in December 2012. VTSSP1 focused on the maintenance and rehabilitation of priority roads on the islands of Ambae, Malekula and Tanna, as well as on the building of priority capacity and institutional reform within the Ministry of Infrastructure and Public Utilities, in particular the Public Works Department. The second phase of VTSSP and will start in March 2013. A total of AU\$36.8<sup>5</sup> has been committed to this phase, part of which is counted as cofinancing for this proposal. It will cover a total 7 islands, 4 more islands (on top of those covered in phase 1) – Pentecost, Epi, Maewo, and Ambrym. Climate change adaptation measures are integrated into the VTSSP (phase 1 only) but focused toward a limited section of the entire road network on the islands of Ambae, Malekula and Tanna. Alternative adaptation approaches for selected sections were evaluated against the CC risks that include sea-level rise, inland and coastal flooding and coastal erosion. The adaptation measures include re-alignment, revetment type wall protection, enlargement of multi-cell box culverts, protection through sealing (bitumen and aggregate), and lining of drains with grouted stone or concrete. These are all hard approaches in climate-proofing coastal infrastructure and a total of AU\$4 million was allocated. PWD allocates the equivalent of \$5,000,000 (\$20,000,000 over 4 years) as government counterpart for VTSSP. For this proposed project, \$10,000,000 is counted as baseline cofinancing over the 4-year project duration based on site coverage and replication.

The horizontal infrastructure proposed in this project to be made more climate-resilient are those planned by the Vanuatu government through VTSSP and PWD. As indicated in the table below, these are relatively small sections of ongoing infrastructure improvements, with the incremental costs for climate resilience being provided by the project. It is emphasized that the proposed activities will be a combination of hard and soft approaches within the broader context of an ICM approach. The approach is in the same scale as the ongoing UNDP/SCCF PACC project activities in Vanuatu which is described in section B.6 below.

The joint UNDP-UNICEF-FAO project<sup>6</sup> also provides the baseline for this proposal. The project was launched in May 2012 and will last for at least 3 years. It covers 12 communities, some of which may also be covered by this proposed project. The project will demonstrate enhanced short- and long-term community resilience and coping capacity to the adverse effects of climate change and natural disasters with special attention to women, children and vulnerable groups. The proposed project will build on and enhance the CC adaptation initiatives in the communities through applicable climate-proofing of infrastructure.

Another baseline is the planned UNDP project on Reducing Risk and Building Community Resilience in the Pacific that will integrate DRR and CC-A in community-level work in 4 Pacific SIDS, including Vanuatu. This is further described in section C.1. However, as this is in the planning stage, no amount is currently indicated.

The Vanuatu Association of NGOs (VANGO) is currently implementing until 2014 the Vanuatu component of the regional Mekong Asia-Pacific Community-based Adaptation Project funded by AusAID. The sites include the following: Lelepa Island; Buninga Island; and Makira Island (all in Shefa province) which are all building resilience

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<sup>5</sup> Half (50%) of this is the amount used in the cofinancing table assuming parity with the US\$ based on projected site coverage and replication. This proposal has been discussed with the AusAID project representatives in Vanuatu and recognized its important contribution with improving the resilience coastal infrastructure they support.

<sup>6</sup> Only the UNDP-UNICEF components are counted as baseline cofinance. Total budget for this project is \$2,921,122 and the allocation for the UNDP-UNICEF components is \$2,447,217. This is described further in section c.1.

of coastal communities to CC impacts and where this proposed project could work. The allocated budget for the Vanuatu communities is \$194,000. There is potential to work in the same communities which will be confirmed during project preparation and the project will build on the initiatives of VANGO.

In consultations with the main implementing partners – DEPC, PWD, VMGD – the long-list of potential project sites is shown below. The sites were selected based on a set of criteria, including vulnerability to CC impacts in the coastal zone, accessibility, presence of ongoing baseline activities, among others. The project will cover at least 6 sites and potentially more depending on the cost needed to improve resilience of coastal infrastructure in each site. The final number of sites will be determined during the PPG phase.

Island (Province)	Community	CC Impacts	Major Climate Change Adaptation Measures under Output 1.2.3 (tentative)
Malekula (Malampa Province)	Tismam and Unua	Flooding	Road re-alignment; improvements in river crossing
Emae (Shefa Province)	Emae Island	Flooding; coastal erosion; sea level rise	Road protection through hard and soft measures
Makira (Shefa Province)	Makira	Flooding; coastal erosion; sea level rise	Protective sea wall construction
Ambae (Penama Province)	West Ambae	Flooding; coastal erosion	Improvements in river crossing
	East Ambae*	Flooding; coastal erosion	Re-vegetation of coastal area
Ambrym (Malampa Province)	Southeast Ambrym	Flooding	Improvements in river crossing
Santo (Sanma Province)	South Santo	Flooding; coastal erosion	Improvements in river crossing; coastal stabilization
Futuna (Tafea Province)	Futuna Is.	Flooding; coastal erosion	Raising elevation of road; re-vegetation of the coastal zone
	Aniwa Is.	Flooding; coastal erosion;	Raising elevation of road; re-vegetation of the coastal zone
Efate (Shefa Province)	Mele to Devil's Point	Flooding; coastal erosion; sea level rise	Road re-alignment; road protection through hard and soft measures
Pentecost (Penama Province)	Baravet to Panngi	Flooding; sea level rise	Road re-alignment; improvement in river crossing; re-vegetation of the coastal zone
Maewo (Penama Province)	Nasawa to Marino	Flooding; sea level rise	Road re-alignment; improvement in river crossing

*Component 2: Information and early warning systems on coastal hazards:* Lack of understanding of CC and variability is a major constraint leading to a coordinated approach to addressing climate related risks in Vanuatu. The lack of systematic analysis and prediction of climate-related events, particularly cyclones have left the country unprepared resulting in losses and the use of scarce government funds for rehabilitation. Financial and human constraints are a major concern among line departments that are dealing with climate-related issues, particularly Meteorology and Environment, which are at present largely dependent on donor assistance to fund activities at the national and community levels.

There is a considerable amount of meteorological data at the Vanuatu Meteorological and Geohazards Department (VMGD) with some records extending as far back as the late 1960s. However, the Meteorological Service has in the recent past experienced problems in terms of processing historical data, maintaining high observation standards and further developing services due to funding, training and staffing constraints. This presents a problem since the data would have contributed to the assessment of how vulnerable a system is to climate change. Although, people living near the towns and cities have access to climate information, it is those that are in the islands that are mostly affected. Lack of information and awareness will further put them at risks to climate change.

Climate-related disasters have always had a huge impact on economic activity and human security in Vanuatu. Yet the frequency and cost of these events will increase with accelerated climate change, in particular in a business-as-usual

scenario. In the next 50 years, tropical cyclones and earthquakes are expected to incur, on average, 48 million USD per year in Vanuatu<sup>7</sup>. This makes the integration of disaster risk management and climate change adaptation a national priority. To date there is no systematic, nation-wide early warning system in place in Vanuatu. This means that a coherent system for risk assessments, a monitoring and warning service operating 24 hours a day, reliable communication channels for early warning, and response capacity is largely missing. Yet the need for such services and functions are important for human security as well as economic development of both land- and marine-based activities.

VMGD currently maintains 7 weather observation sites for the collection of basic meteorological data such as temperature, dew point, rainfall, wind direction, soil temperature among others. These are located in Sola – Banks, Torba Province; Saratamata – Ambae, Penama Province; Pekoa Airport, Santo, Sanma Province; Lamap, Malekula, Malampa Province; Bauerfield Airport, Port Vila, Efate, Shefa Province; Anelghauhat, Aneityum Island, Tafea Province. Data is recorded every 3 hours and transmitted to the central VMGD office every 3 hours. Currently, the system is maintained at an estimated annual cost of \$210,000 for a total of \$840,000 for a period of 4 years.

JICA is currently designing a bilateral assistance project “Improvement of Equipment for Disaster Risk Management in Vanuatu” which will provide equipment for the monitoring of tsunamis including strong motion seismometer, sea level and tidal gauge and an early warning system. Design is scheduled for completion in mid 2013. The focus is on seismology but may be expanded to include climate-related risks. JICA has allocated a total budget of \$300,000.

This project proposes to convert the 7 sites into automated weather stations. In addition, 7 sites will be covered for better coverage and forecasts. For monitoring of coastal flooding, 5 additional sites to the JICA-funded sites will be funded by this project.

*Component 3: Climate change governance:* The government of Vanuatu is committed to mainstreaming climate change into national planning and development plans. Although climate change is yet to be properly considered and integrated into legal frameworks, national planning, sector plans and coastal management, there has been significant progress. The formation of the NACCC and the Vanuatu Climate Change Secretariat and subsequently the NAB are key steps in strengthening climate change governance. Various legislations and policies are draft form such as the National CC Policy while the sector policies have yet to integrate CC aspects and need to be updated.

Climate governance is hindered by lack of expertise, competing demands on staff time, inadequate equipment, and lack of incentives. This constrains the government to adequately account for climate change as well as interaction between climate change, economic development, and human wellbeing. Lack of coordination between different policy sectors as well as between national, provincial and local governments also exacerbates difficulties in mainstreaming climate change.

It is envisaged that commitment would be coming forth from government to provide support to some of these important manpower and financial resources because it would be beneficial for the country as a whole and it also makes economic sense. Work of these dedicated officers in providing forecasting, and assisting in assessments of cyclone activities and be able to predict future climate related events will assist the country be more resilient to current and future climate related risks.

Capacity building activities will target key staff of national and provincial agencies and the community leaders and residents where the project will implement ICM-based CC adaptation measures. Component 4 will serve to expand the beneficiaries of the trainings through education and awareness-raising activities.

For the national and provincial government agencies, the main targets are the staff from the primary implementing partners, namely, the recently created NAB, DEPC, PWD and VMGD. Other agencies such as the Department of Internal Affairs, Departments of Fisheries, Forestry and Water will also participate. Priority areas for capacity building include design and identification of CC adaptation measures in the context of ICM, formulation and

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<sup>7</sup> The Pacific Catastrophe Risk Assessment and Financing Initiative

mainstreaming of climate-related policies and regulations and monitoring and evaluating compliance and enforcement, within the context of their respective offices. The capacity building activities will be designed in ways that the analytical mindsets are broadened through periodic mentoring and monitoring. It is through sustained efforts that capacity building activities will have lasting impacts on the participants and therefore on the objectives of the project.

Communities will be empowered to deal with climate change impacts in the coastal zone through participatory approaches in vulnerability assessments, planning and community-based adaptation measures and capacity building. Project activities at the community level will be driven by the communities themselves with the project facilitating the processes. Capacity building is intertwined with the implementation of other project components in order to realize sustainable impacts.

*Component 4: Knowledge management:* The majority of the population has little knowledge about climate change and its impacts. Lack of knowledge and training constitutes a major barrier to climate resilience. The NAPA emphasizes that awareness raising and education are core issues that should be an integral part of any proposed CC adaptation project. The lack of human, financial, and technical resources often constrains information sharing, education, and knowledge generation on climate change.

Knowledge management will consider Vanuatu's high literacy rate (94% in 2009) and limited access to the internet (middle to bottom in the global rankings). The project will document lessons learned, including emerging lessons, that might be useful for replication in other sites for this other projects. Information kits about the project will be prepared. Various environmental media will be tapped, including print, radio and broadcast. A project website will be created to cater to the climate change community of practitioners within Vanuatu and elsewhere. Contributions will be made to global portals such as the Adaptation Learning Mechanism.

- B.2. Incremental / Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund/NPIF) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

*Adaptation alternative for component 1:* The component is designed to achieve effective community engagement in planning (through the preparation of the CC-A and preparedness and response plans) and the subsequent execution of the plan to ensure that interventions are owned by and are relevant to the target vulnerable communities. With technical input and facilitation by the project, communities will prepare CC adaptation plans for each project site to mitigate climate-related vulnerabilities in the coastal zone. These plans will be formally adopted and endorsed by village councils following existing community and local government processes. It is expected that the CC-A plans will improve the climate resilience of the vulnerable coastal communities by addressing the negative impacts of climate change through soft and hard adaptation measures. The formulation of CC-A plans will be in the context of ICM as described earlier.

The menu of CC-A measures is partly indicated in the description of the potential project sites in earlier section. Direct interventions will include enhancing mangrove stands or establishing new ones with the primary objective of protecting coastal communities, mitigating erosion, and restoring fisheries-related functions. To further maintain key ecological functions rehabilitation of depleted fisheries and other marine resources will be considered as the Department of Fisheries is breeding certain shellfishes in captivity. To accelerate the impact of such activities the project will identify potential sustainable uses of mangroves, coral reefs and fisheries resources and raise awareness about the links between ecosystem resilience and human well-being. This may include recommendations on fishing regulations e.g. gear types, catch numbers, minimum size restrictions, etc.

To further enhance the ability of coastal ecosystem to withstand impacts of climate change, the project will have to identify how non-climate human induced stressors on the coastal zone can be reduced. The project will also evaluate

the need for complementary interventions such as the reduction of sediment from land-based sources and the construction of hard structures and other barriers to stabilize the coastline.

The component aims to reduce direct and long-term vulnerability of human settlements in the project sites and enhance the preparedness of these communities to cope with changing climatic conditions, including cyclones, storm surges and flooding. To reduce exposure to climate-related risks and hazards in the targeted communities, the project will develop provincial/local risk management, disaster preparedness and response plans and install an automated early warning system that can operate 24 hours a day. Disaster plans will be developed and integrated into the CC-A plans using a participatory approach to ensure that knowledge and skills are transmitted to rural communities.

A potential major task for this component aims to climate-proof public conveyance infrastructure in the project sites to improve the ability of important infrastructure to withstand extreme weather events. In combination, such measures would not only enhance climate resilience of entire coastal areas, but also bring significant spillover effects to the country's economy. The project will ensure that ecological variables and ecosystem dynamics are adequately taken into consideration during all stages of the project to promote long-term social-ecological sustainability and avoid detrimental impacts on the coastal environment.

*Adaptation alternative component 2:* The project will evaluate the need for additional local weather monitoring systems, alarms, and Automatic Weather Stations (AWSs) to be installed. The project proposes to upgrade the existing 7 observation sites into AWS. In addition, 7 sites will be put up to cover the entire country and improve the quality of meteorological and other data for the early warning systems. The additional sites are identified as follows: Linua, Torres, Torba Province; Largemoli Santo, Sanma province; Norsup, Malekula, Malampa province; Lonoro, Pentecost, Penama province; Ambryum, Craigove, Malampa province; Epi, Laman, Shefa province; Ipota, Erromango Island, Tafea province. The additional sites will be finalized during project preparation.

The monitoring of coastal waters in relation to climate-related events such as cyclones and projected sea-level rise will build on the JICA-funded project which will put in place 5 monitoring sites. The project will finance additional monitoring sites (at least 5), with the appropriate number to be determined during project implementation.

The component is also designed to improve the capacity of key national agencies, primarily the VMGD, to systematically gather and analyze climate information and disseminate early warnings and sector-tailored climate information. The proposed activities are particularly important because of the location of human settlement and key economic branches in the coastal zone and because of the forecasted increase in tropical cyclones. This very technical training is not included in component 3 which pertains to general climate-related capacity building activities.

*Adaptation alternative component 3:* The component aims to improve institutional capacity so as to steer the political system, the private sector, and communities toward preventing, mitigating, and adapting to the risks posed by climate change. The component provides for targeted support in key areas in the main ministries and agencies involved in the activities proposed by their project. The core agencies who form the national core team of the NAB may participate actively in the proposed initiatives of this component. Ministry of Infrastructure, Health, Agriculture, Forestry, Fisheries, Internal Affairs, Department of Strategic Policy, Planning and Aid Coordination. Special emphasis of the training activities will be for the DEPC and PWD staff.

The project will provide training and education to enhance the capacity of these agencies to actively promote and meaningfully engage in climate governance and knowledge generation. In so doing, the project will also consider how coordination and communication linkages between these agencies may be improved. The project will support reform of overarching policy frameworks and legislation to ensure climate concerns are mainstreamed into the government and effectively taken into account in national/provincial planning and resource allocation. The project will collaborate with the governance component of the PACC<sup>8</sup> project by addressing the gaps. The priorities will be the finalization of the National CC Policy which is currently in draft form and the review of ICM policy. Other policies and laws will be

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<sup>8</sup> The PACC project is developing building codes which are non-existent in Vanuatu and to also incorporate the impacts of CC in such infrastructure.

targeted for including CC components: EIA Policy; Foreshore Development Act, Environmental Management and Conservation Act, National Disaster Act, Forestry Act, Fisheries Act, National Parks Act, and the Water Resource Management Act, Land Use Policy, etc. Such measures would also help in ensuring that information about climate-related risks, vulnerability, and adaptation options are transferred to policy sectors and economic branches. The component is designed to enable full realization of the benefits of components 1 and 2 by enhancing long-term institutional capacity to cope with climate change.

The participatory formulation and implementation of the CC-A and other plans are primarily vested to the communities with the technical support from the project. Hence, an important activity in this component is the provision of lectures (on ICM and general CC issues) and 'on-the-job' training on vulnerability assessments, preparation of CC-A and preparedness and response plans. Information about CC and its impacts is key to empowerment and communities' access will be addressed through activities in component 4.

*Adaptation alternative component 4:* The component comprises a series of outreach (including training activities beyond those covered in components 2 and 3), using different forms of media, those aim to engage with and raise the awareness of rural communities and other civil society partners such schools about climate change. Such activities will also include training to households, business owners, and other individuals in the identification and undertaking of climate-resilient practices. The component will make sure that the best available information on practices pertaining to each programme component is readily accessible to all stakeholders and partners. For this purpose, focal points for communities and other stakeholders seeking information about the project or guidance on climate change will be established. Such focal point can be used to organize forums for dialogue or to conduct stakeholder consultations to design adaptation actions with broad relevance to the beneficiaries of such activities. The implementation of the project will also generate a large amount of information and valuable knowledge on best practices and lessons learned. Such information and knowledge will be organized, translated and made accessible to the government, concerned communities and civil society partners to strengthen on-the-ground adaptation activities, facilitate cross-fertilization of relevant efforts, and inform decision-making on future adaptation actions in Vanuatu. Such information will also be distributed globally through UNDP. In combination, the component seeks to ensure that climate adaptation and ICM can be sustained as core activities of the government and civil society in the future.

- B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environmental benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read Mainstreaming Gender at the GEF:

The project is focused upon practical adaptation measures being adopted at village, provincial and national levels. Climate change adaptation and ICM is critical due to the location of human settlements, arable land, and infrastructure development in the coastal zone. Proposed adaptation activities will significantly reduce the vulnerability of targeted rural communities to climate-related risks and enhance their capacity to meaningfully engage in coastal planning and adaptation schemes. The project may therefore reduce the potential loss of lives during climate change related natural disasters, enhance food and livelihood security, and improve the effectiveness of coastal management.

At the national level, the capacity of relevant government agencies will be improved and wider enabling conditions for climate governance established. Governance arrangements for coordination across government agencies and between authorities at the national, provincial, and community level will also be improved. The project could bring economic benefits by reducing the cost of repairing or replacing damaged infrastructure and the expenditures that the Vanuatu government may need to incur in the aftermath of a climate-related disaster to provide necessary relief. Active measures to mitigate the degradation of coastal ecosystems will bring socio-economic benefits as economic development and human wellbeing often depend on the resilience of these systems. On the whole, especially considering future climate scenarios, promoting climate resilience is important to achieve many of the Millennium Development Goals. In integrating outputs on knowledge management and capacity building, the project will transmit know-how and experience to future generations of community leaders, planners, and policymakers.

The project will strive to promote gender equality in both planning and execution of the proposed components to ensure that men and women benefit equally from the targeted interventions. On-the-ground adaptation activities in

component 1, 2 & 4 will actively encourage the participation of women to incorporate into planning their particular situation and role in coastal resource management. Policy-oriented activities in component 4 will account for different vulnerabilities according to gender, culture and other characteristics that influence people’s capacity to prepare for and respond to climate-related disasters. Component 2 & 4 will have to consider that access to information and early warning may vary between groups. Lastly, gender will be incorporated as an explicit variable for review in monitoring and evaluation.

B.4. Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

The following table details the risks faced by the project, the risk level, and the mitigation measures that will be put in place to mitigate risks:

<b>Risk</b>	<b>Rating</b>	<b>Mitigation</b>
Limited capacity in government agencies to implement the project and sustain project outcomes	M	Capacity building is one of the project components. This would cover capacity building of government partners and communities in all aspects of the project and post-project activities. Ownership of the project by the partners will be ensured by letting them take the lead with assistance from the project team. Technical assistance will be carefully used to build rather than substitute for capacity. A coordinated approach by the implementing partner with other agencies involved to leverage on training opportunities and resources available.
Lack of data to design adaptation measures	L	The project includes a component to strengthen data capture and management as well as vulnerability/risk assessments. Further, the PPG phase will include data collection and consultations that will form the basis for design of the adaptation measures.
Weak coordination and communication amongst project partners may impede project progress	M	The project will formulate a clear coordination mechanism amongst partners providing mechanisms for seeking their inputs at all levels (project steering committee, project site committees, etc.). Establish a National Project Management Team (NPMT) to oversee the whole operations & management of the project. The project will be coordinated through the recently created NAB which appropriate mandate for coordination and resources for carrying out its mandate. The risk lies in the fact that it is a new organization whose capacity will be enhanced by the project.
Participation by communities may not come at a level necessary to ensure project success	L	As the project outputs and outcomes will benefit communities directly, it is expected that cooperation will be at the highest level. Participatory approaches, capacity building and communications will build strong ownership by communities. The project will also explore in-kind inputs from communities, where feasible. Conduct a detailed baseline study prior to engagement of communities to ensure that we collate & understand the community well and in so doing we tailor a workable approach to buy in their participation.
Gender inequality may impede project progress and achievements	L	The project will continuously promote the participation of women in the project and ensure that a gender perspective is integrated into planning and execution of the project.
Large tracts of land under customary ownership could be an impediment to CC-A if landowners do not cooperate.	M	The process of formulating and implementing the project will be participatory and include a series of consultations with rural communities, including with landowners. The benefits from CC-A will be emphasized with landowners.
Climate change risks	L	Project will explicitly consider this as it is about adaptation to CC impacts
Political instability	L	The Project to engage with implementing partners at national level to the level of technical staff, directors and director generals in project implementation. Project management may encourage the cooperation of the various ministries to buy in where necessary to have the top-level support.



- B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

The Climate change Secretariat hosted by the Vanuatu Meteorological Services has in the past taking the lead role in all climate change adaptation programmes in country. With the current institutional structure in place, the present members who form the NAB is considered essential to form the technical committee to ensure that project delivers the results on ground based on the agreed work-plans. For Infrastructure related undertaking the Ministry responsible may become the main player in weather proofing infrastructure design. Activities that require human resource manpower can be delegated to indigenous communities thus reducing the risk of using heavy machineries that may impose more environmental stress and degradation of natural ecosystems. While the existing government network remains intact with the provincial government at national level, sub provincial steering committees could prove beneficial to reinforce the ownership element where their involvement would encourage the communities to realize the full benefits the project may deliver.

- B.6. Outline the coordination with other related initiatives:

Significant coordination with the NAB, which coordinates all climate change activities and aims to provide scientific, technical, and policy guidance on climate change, is required in all stages of the project cycle. Coordination with the National Disaster Management Office (NDMO) is also required to identify adaptation measures to the various hazards posed by climate change. Other sector agencies that engage in development initiatives on the coastlines such as the fisheries department, Agriculture, and Public works department are also imperative to provide innovative approaches to minimize and adapt to weather conditions along the costal zones. Their role is to collaborate with Department of Environment and NAB to ensure that activities are implemented effectively in meeting the requirements of the Environment Act and priorities stated under the NAPA. It is also equally important to strengthen the partnership with relevant climate change projects where knowledge sharing among the implementing partners could be enhanced and lessons learned to be documented for future initiatives in ICM.

The proposed project will coordinate with the following ongoing and planned activities in Vanuatu.

- *Pacific Island Climate Change Assistance Programme (PICCAP)*. This UNDP-GEF project is the first serious initiative to address the issues related to climate change in several Pacific Island countries. The focus and emphasis of the programme was to build skills and knowledge of national experts to carry out vulnerability assessments and to assist with the completion of their first national communication as required under the UNFCCC. Adaptation was not a main focus of this programme so more detailed adaptation work with Pacific island country institutions and in particular communities is needed.
- *Pacific Adaptation to Climate Change (PACC)*. The PACC Project aims to significantly improve the effectiveness of the response to climate change in the Pacific. In Vanuatu, PACC is supporting the design of relocating parts of roads on Epi Island as an adaptation measure to sea level rise as about 40% of the current roads are located next to the high water mark, which include the Lamén Bay airstrip. As an adaptation measure, the project will relocate the current roads to safer ground and address drainage systems to allow for run-off during heavy rainfall and sedimentation ponds to limit sedimentation. PACC is implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) in partnership with UNDP. It is funded by the GEF, AusAID and UNITAR. The proposed project will work closely with PACC considering the similar thematic scope.
- *Pacific Integrated Water Resources Management (IWRM) Project*. The regional project is implementing a demonstration work in the he Sarakata catchment is the main source of water for the town of Luganville on Espiritu Santo Island, which is the second largest urban centre in Vanuatu. There are many informal settlements along the banks of the Sarakata, most of which have no access to running water. The participatory research focuses on these settlements and risks to their water quality and to the river. Vanuatu, like most Pacific Island Countries, is progressing a national agenda for Integrated Water Resource Management. It has recently adopted a new national water policy. Opportunities for collaboration will be identified during the PPG phase. It is noted that PWD is implementing this project.
- *Promotion of the Grace of the Sea in Coastal Villages Project*. This is the second phase of a JICA-funded project that started in early 2012 and will run for three years. The project objectives are to: (i) produce seeds of key aquaculture species, such as giant clams, green snail, trochus and sea cucumber; (ii) develop management plans for

each species and implement grow-out farms for giant clams in coastal areas; and (iii) carry out educational programmes targeting school children and communities. The project is housed in Vanuatu Fisheries Department (VFD). The purpose of the Grace of the Sea Project is to promote community-based coastal resource management with the overall goal statement that reads “*Livelihoods of coastal communities are improved through the community-based resource management at the model sites and the resource propagation of the target species occupying the model areas*” The project targets the following species and includes trochus (*Trochus niloticus*), green snail (*Turbo mamoratus*) and giant clam (*Tridacna spp*) in Mangaliliu village, Lelepa, Sunae and Tassiriki village on Moso. The proposed project will explore collaboration in promoting fisheries-based sustainable livelihoods.

- *Mangrove EcoSystems for Climate Change Adaptation and Livelihoods (MESCAL) Project*. This regional IUCN project covering Vanuatu, Fiji, Samoa, Solomon Islands and Tonga aims to help Pacific Islanders effectively manage their mangrove and associated coastal ecosystems to build resilience to the potential consequences of climate change and variability on coastal areas and support/enhance livelihoods. In Vanuatu, the project is implementing activities that are very relevant to the proposed project. These include generating baseline information, supporting local governance, implementing demonstration activities, among others.

- *Increasing Resilience to Climate Change and Natural Hazards in Vanuatu*. This project was recently approved by the WB with financial support from the LDCF among other donors. The objective is to increase resilience of communities in Vanuatu to the impacts of climate variability and change and geological hazards, on food and water security, as well as livelihoods. Based on the Project Appraisal Document provided by the WB, the sector scope of this proposed project is broader and also includes coastal communities. Coordination will be done to avoid primarily geographic overlaps. The WB project has identified two initial coastal pilot sites for Integrated DRM and Adaptation Activities – one in East Ambae, Penama Province and another in Aneityum, Tafea Province. With the potential overlap in East Ambae, the UNDP project could instead cover West Ambae once this is verified on the ground during the PPG phase. The Integrated DRM and Adaptation in the WB project could guide the ICM-based climate change adaptation approach proposed in this project. VMGD has confirmed that component 2 of this proposal will not overlap with the WB project as its focus is on geological hazards. Synergies will be sought during project design in specific areas including capacity building, mainstreaming, etc. As of July 2012, the WB-LDCF project is being appraised and the documentation is not formally available.

- *Climate Proofing Development in the Pacific*. This ADB-proposed programmatic approach is expected to reduce vulnerability of vital infrastructure in the Pacific LDCs through the implementation of NAPA priorities. The proposed activity for Vanuatu is the inclusion of CC adaptation and disaster risk management for the Port Vila urban drainage and transport plans. The nature of concrete adaptation measures proposed are entirely different from the UNDP proposal, however, there could be synergies in the soft components on governance and knowledge management. Project preparation is being planned by ADB to start in November 2012 at which time the scope of the soft components of the project<sup>9</sup> will be finalized. The PPG for this project could follow in early 2013 and activities will be coordinated with those with ADB.

Project management and coordination arrangements will be put in place at the national and site levels to ensure that the project is not implemented in isolation but in close collaboration with all relevant partners. At the core will be a Project Steering Committee (PSC) to be composed of key government, non-government partners, private sector (as applicable) and UNDP. The key government partners include DEPC, PWD and VMGD, all of which will be represented in the PSC. The PSC will provide overall guidance and direction for the project. The number of PSC members will be limited to about 7 although this will be determined during project preparation, including the composition. The NAB will ensure coordination of the project with all the related CC projects in Vanuatu. Representatives of the major baseline projects, including VTSSP will be represented in the PSC for proper coordination. As mentioned above, the NAB’s coordination role at the national level will be strengthened in collaboration with all other CC and related projects.

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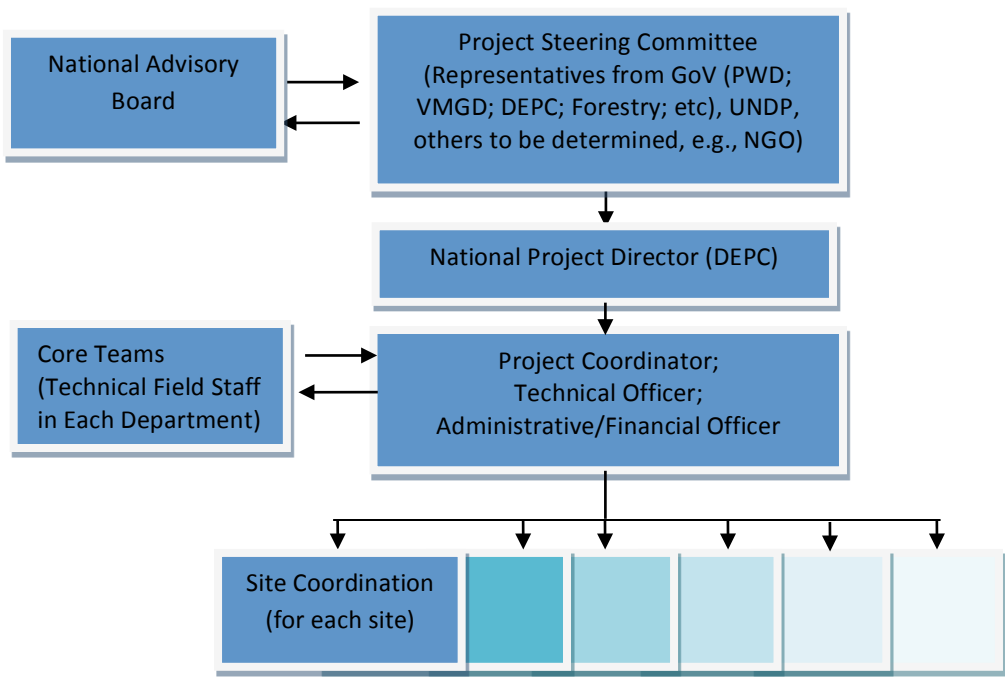
<sup>9</sup> The ADB LDCF project in Vanuatu is part of a regional programme “Climate Proofing Development in the Pacific” and the programmatic modality applicable to ADB does not require the formulation of a PIF that would have provided description of the project prior to design.

An indicative and simplified project execution arrangement is shown in the figure below. It is emphasized that this will be finalized during project preparation. The national project director will be seconded staff from the government main executing partner while project coordinator will be responsible for the day-to-day operations of the project. Coordination and implementation at the site will be determined jointly with the communities and local governments.

The implementation of adaptation activities to address the impacts of CC in the coastal zone constitutes the biggest component of the project. The sites will be finalized during project preparation but these will be the areas covered by VTSSP and potentially those of the UNDP-UNICEF-FAO joint project and those implemented by VANGO. At the local level, project community committees (PCC) will be formed consisting of representatives from the communities, local governments, groups working in the community, project management office, among others. It will be the forum for coordinating site-based project activities with all partners. A Project Management Office (PMO) reporting to the PSC will be established to run the day-to-day project activities. The composition and responsibilities of the proposed PSC, PMO, AG and PCC will be determined during the preparation phase. It is emphasized that the PSC, AG and PCC, where feasible will all be integrated within the existing institutional mechanisms and arrangements at the national and local levels.

The implementation of community-level activities will be coursed through eligible NGOs/CBOs with strong track record in similar activities. VANGO which is the national umbrella organization in charge of implementing the GEF-SGP in the country will be tapped in the selection of NGOs/CBOs and potentially tapped for oversight. Specific arrangements will be specified during PPG phase. VANGO is well-placed for this purpose as it was established as the national focal point for all NGOs, CSOs and CBOs. VANGO currently has 123 registered members. It is crucial point of exchange for its members with the government, development partners and donors at national and international level.

This project will be implemented as a NIM/DIM modality whereby DEPC will be the lead executing entity while UNDP, PWD and VMGD will be implementing partners. This project will adopt a National Implementation (NIM) modality but will be executed as a Direct Implementation (DIM) project due to challenges in manpower and capacity within the government ministry. Under the direct implementation modality UNDP takes on the role of the principal contractor – subcontracting project components and activities, recruitment, and procuring materials directly.



### C. DESCRIBE THE GEF AGENCY’S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

C.1. Indicate the co-financing amount the GEF agency is bringing to the project:

UNDP, together with FAO and UNICEF, launched in May 2012 the project “Community resilience and coping with climate-change and natural disasters in Vanuatu” that is expected to be completed in May 2014. The main purpose of the project is to demonstrate enhanced short- and long-term community resilience and coping capacity to at least 6 categories of adverse effects of climate change and natural disasters. Of relevance to this proposal are the following climate-enhanced threats: cyclones; rising sea level; floods; and water shortage. The communities covered are listed below, excluding communities where the major threat identified are earthquakes, volcanic eruption and tsunamis induced by earthquakes. The LDCF project will assess the potential for cost-sharing in these communities particularly in implementation of climate change adaptation plans.

Province	Selected Threat	Selected Areas/Local Councils
1. Torba	Cyclone	Mera Lava
	Rising sea level	Loh Island
2. Shefa	Cyclone; floods	Marae and Finonge
3. Tafea	Drought/shortage of water	Aniwa or Anaichom
4. Sanma	Floods	South Santo (Ipaicato Village)
5. Penama	Rising sea level	East Ambae – Lolowai Sarakata
	Drought/Shortage of water 1	West Ambae

UNDP is implementing two components (disaster risk reduction and management; governance) with a combined allocation of \$731,345; UNICEF with two components (water security; knowledge management) for \$1,745,872; FAO with one component (food and nutrition security) for \$443,906. The cofinancing counted for this project includes the UNDP and UNICEF components for a total of \$2,447,217.

Another baseline project is the programme *Reducing Risk and Building Community Resilience in the Pacific* that is currently being finalized by the UNDP Pacific Centre with financial support from AusAID. This regional programme will cover Vanuatu, Solomon Islands, Tonga and Fiji and is projected to start in late 2012 until 2015. The approach will integrate Disaster Risk Reduction (DRR) and CC-A considering their common focus of reducing vulnerability of communities, building resilience and contributing to mainstream sustainable development. Indicative resources stand at AUD 4 million per year for a total of AUD 16 million over four years. The allocation for Vanuatu will be determined in the coming months hence this is not included in the co-financing table at this time.

The project document is being developed but based on available description of the programme there is potential complementation in Component 1 of this LDCF proposal. The programme objective is to strengthen the resilience of Pacific Island communities to natural disasters and climate change related risk. The community-level work is envisioned to include the following: development and implementation of community plans with DRR and CC-A lens; capacity building to ensure development and governance enhance community resilience; fostering strong local government-community-NGO links; and early warning and evacuation. There is potential for working together in the same communities through cost-sharing which enable this LDCF project and the other UNDP-implemented project to cover as many vulnerable communities as possible.

C.2. How does the project fit into the GEF agency’s programme (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The UNDAF for the Pacific Region was just updated for the period 2013-2017. Of relevance to this proposal is the Regional UNDAF Outcome 1.1: Improved resilience of PICTs, with particular focus on communities, through integrated implementation of sustainable environmental management, climate change adaptation/mitigation, and disaster risk management. The results matrix for Vanuatu indicates that as part of the National Development Priority, the UN will “ensure the protection and conservation of Vanuatu’s natural resources and biodiversity, taking climate change issues in consideration” (PAA PO 4.5) and “prepare the people of Vanuatu to face disasters” (PAA PO 4.6).


Consequently, the UN agencies, including UNDP will aim to strengthen the capacity at national, local and community level to effectively plan and implement climate change adaptation and disaster risk reduction. The following outputs under this outcome are directly relevant to this proposed LDCF project: 1.1.1: Strengthened capacity of national and local government and civil societies to directly access and effectively manage climate funds; 1.1.2: Environmental/CC/DRM policy are mainstreamed and harmonized across ministerial, sector and provincial plans; 1.1.3: Community strategies for climate change and disaster risk management are up-scaled and replicated.

**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT AND GEF AGENCIES**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT ON BEHALF OF THE GOVERNMENT:** (Please attaché the Operational Focal Point endorsement letter with this template.)

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>Date MM/dd/yyyy)</b>
Mr. Albert Abel WILLIAMS	Director	Department of Environmental Protection and Conservation	June 28, 2012

**B. GEF AGENCY CERTIFICATION**

<b>Agency Coordinator, Agency Name</b>	<b>Signature</b>	<b>Date MM/dd/yyyy)</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>E-mail Address</b>
Yannick Glemarec Executive Coordinator, UNDP/GEF		October 12, 2012	Jose Erez Padilla (Gr-LECRDS)	66 (0) 2304 9100 Ext.2644	jose.padilla@undp.org

DEPARTMENT OF ENVIRONMENTAL  
PROTECTION AND CONSERVATION



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28<sup>th</sup> June, 2012.

To: Yannick Glemarec  
UNDP/GEF Executive Coordinator  
304 East 45<sup>th</sup> Street, Room FF-916, New York 10017

**Subject: Endorsement for "Adaptation to Climate Change in the Coastal Zone in Vanuatu" Project**

In my capacity as GEF Operational Focal Point for Vanuatu, I confirm that the above project proposal (a) is in accordance with my government's national priorities including the priorities identified in the National Adaptation Program of Action (NAPA) and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency listed below. If approved, the proposal will be prepared and implemented by the Department of Environmental Protection & Conservation. I request the GEF Agency to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing (from LDCF) being requested for this project is US\$9,108,000, inclusive of project preparation grant (PPG) and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Vanuatu is detailed in the table below.

Source of Funds	GEF Agency	Focal Area	Amount (in US\$)			
			Project Preparation	Project	Fee	Total
LDCF	UNDP	CC	250,000	8,030,000	828,000	9,108,000
Total GEF Resources			250,000	8,030,000	828,000	9,108,000

Sincerely,

Mr. Albert Williams  
**Director for Environmental Protection & Conservation**



Cc: Convention Focal Point for UNFCCC  
Knut Ostby, UNDP Fiji MCO  
Jose E. Padilla, UNDP APRC