Adaptation to Climate Change in the Coastal Zone in Vanuatu – Phase II (VCAP II)

Part I: Project Information

GEF ID

Project Type
FSP

Type of Trust Fund
MTF

CBIT/NGI
- ☐ CBIT
- ☐ NGI

Project Title
Adaptation to Climate Change in the Coastal Zone in Vanuatu – Phase II (VCAP II)

Countries
Vanuatu

Agency(ies)
UNDP

Other Executing Partner(s)
Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management

Executing Partner Type
Government

GEF Focal Area

Multi Focal Area

Taxonomy

Mainstreaming, Biodiversity, Land Degradation, Focal Areas, Climate Change, Influencing models, Stakeholders, Gender Equality, Gender results areas, Integrated Programs, Capacity, Knowledge and Research, Climate Change Adaptation, Complementarity, National Adaptation Plan, Disaster risk management, Sea-level rise, Climate resilience, National Adaptation Programme of Action, Community-based adaptation, Small Island Developing States, Least Developed Countries, Climate information, Ecosystem-based Adaptation, Innovation, Forest, Forest and Landscape Restoration, Sustainable Land Management, Sustainable Livelihoods, Improved Soil and Water Management Techniques, Sustainable Agriculture, Community-Based Natural Resource Management, Integrated and Cross-sectoral approach, Ecosystem Approach, Restoration and Rehabilitation of Degraded Lands, Food Security, Land Degradation Neutrality, Land Productivity, Species, Invasive Alien Species, Agriculture and agrobiodiversity, Fisheries, Infrastructure, Protected Areas and Landscapes, Coastal and Marine Protected Areas, Community Based Natural Resource Mngt, Terrestrial Protected Areas, Productive Landscapes, Biomes, Wetlands, Sea Grasses, Tropical Rain Forests, Lakes, Rivers, Mangroves, Coral Reefs, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Demonstrate innovative approache, Civil Society, Non-Governmental Organization, Community Based Organization, Private Sector, Individuals/Entrepreneurs, Local Communities, Beneficiaries, Communications, Public Campaigns, Education, Awareness Raising, Type of Engagement, Partnership, Information Dissemination, Consultation, Participation, Access to benefits and services, Capacity Development, Access and control over natural resources, Participation and leadership, Knowledge Generation and Exchange, Food Systems, Land Use and Restoration, Integrated Landscapes, Sustainable Commodity Production, Comprehensive Land Use Planning, Sustainable Food Systems, Learning, Theory of change, Adaptive management

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 2

Duration

60 In Months

Agency Fee($)

1,128,963

Submission Date

10/10/2019

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-2-7	GET	3,136,009	20,000,000
CCA-1	LDCF	6,720,020	5,000,000
LD-1-1	GET	2,688,008	5,000,000
	Total Project Cost ($)	**12,544,037**	**30,000,000**

B. Indicative Project description summary

Project Objective

To improve the resilience of the vulnerable areas and communities therein to the impacts of climate change through integrated approaches in order to sustain livelihoods, food production and preserve and improve the quality of life by building on the lessons learned from the first phase project.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 1: Integrated community approaches to climate change adaptation developed and implemented	Technical Assistance	Outcome 1.1: Integrated Community level CC-Adaptation plans mainstreamed in Area and Provincial Councils Outcome 1.2: Improved climate resilience of coastal and upland areas through integrated approaches	1.1.1 CC-Adaptation Plans (including nature-based solutions) mainstreamed into Provincial and Integrated Area Council Development Plans and supported in selected Area Councils 1.2.1 Ecosystem- or nature-based solutions towards improved climate resilience implemented through conservation, protection and rehabilitation of upland island ecosystems through strengthening land management through a ridge-to-reef approaches, and associated activities. Output 1.2.2 Ecosystem- or nature-based solutions towards improved climate resilience implemented through conservation, protection and rehabilitation of important coastal ecosystems and resources and their biodiversity such as mangroves, coral reefs, and associated fisheries at the same time to support livelihoods and food production Output 1.2.3 Improved resilience through climate proofing of selected public conveyance infrastructure and evacuation facilities in the coastal zone in selected priority vulnerable coastal communities.	GET	3,136,009	20,000,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 2: Information and early warning systems on coastal hazards	Technical Assistance	Outcome 2.1: Reduced exposure to flood-related risks and hazards in the target coastal and inland communities	Output 2.1.1. Automated systems for real time monitoring of climate-related hazards such as coastal flooding, storm surges, sea-level rise designed, landslides installed and maintained in selected vulnerable areas Output 2.1.2 Timely releases of early warnings about cyclones, coastal flooding, landslides and storm surges through various public media; early warnings are received in a timely manner by all concerned villages in all islands in Vanuatu Output 2.1.3 Capacity of VMGD staff in the operation and maintenance of weather forecasting (long-range (?) and short-range) AWS and in the analysis of data strengthened	GET	2,688,008	5,000,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 3: Climate Change and Natural Resource Management Governance Component 4: Knowledge management	Technical Assistance	Outcome 3.1: Climate change *adaptation* enabling policies and supportive institutions in place Outcome3.2: Human resources in *place* at the national, provincial and community levels Outcome 4.1: Increased awareness and ownership of climate risk reduction processes at the national and local levels.	Output 3.1.1. Legislation and national/sector policies reviewed to ensure integration of climate change adaptation and a policy reform agenda developed and implemented (need to be specific) E.g. incorporation of CCDRR into the EIA Policy, and sector policies in forestry, coastal fisheries, agriculture, water and sanitation-incorporating ecosystem-based or nature-based solutions to CC adaptation). Output 3.2.1 Capacity building of key national and provincial government agencies (DEPC, DCC, PWD, Department of Internal Affairs, Departments of Fisheries, Forestry, Water) in areas of compliance and enforcement, monitoring and evaluation and mainstreaming of climate-related poliies and nature-based solutions and regulations. Output 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. Output 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	LDCF	6,720,020	5,000,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
				Sub Total ($)	**12,544,037**	**30,000,000**
Project Management Cost (PMC)						
				GET		
				LDCF		
				Sub Total($)	**0**	**0**
				Total Project Cost($)	**12,544,037**	**30,000,000**

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Government	Departments of Climate Change, Environment, Fisheries, Forestry, Agriculture, Water Resources, Local Authorities, Public Works	In-kind	Recurrent expenditures	15,000,000
Others	Support to Public Works Department for upgrading roads by integrating climate concerns	In-kind	Recurrent expenditures	5,000,000
Others	Australian Government	In-kind	Recurrent expenditures	1,000,000
Others	Climate Information Services for Resilient Development in Vanuatu (GCF)	In-kind	Recurrent expenditures	5,000,000
Others	USAID Pacific Ready Project	Grant	Investment mobilized	1,000,000
Others	Nia Tero	In-kind	Recurrent expenditures	60,000
Others	By-catch The By-catch and Integrated Ecosystem Management (BIEM) -)	In-kind	Recurrent expenditures	750,000
GEF Agency	UNDP	In-kind	Recurrent expenditures	190,000
GEF Agency	UNDP	In-kind	Recurrent expenditures	2,000,000

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
			Total Project Cost($)	30,000,000

Describe how any "Investment Mobilized" was identified

*Expected support for project formulation and initial implementation through consultants.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Vanuatu	Biodiversity	BD STAR Allocation	3,136,009	282,241	3,418,250
UNDP	GET	Vanuatu	Climate Change	CC STAR Allocation	1,344,004	120,960	1,464,964
UNDP	LDCF	Vanuatu	Climate Change	NA	6,720,020	604,802	7,324,822
UNDP	GET	Vanuatu	Land Degradation	LD STAR Allocation	1,344,004	120,960	1,464,964
				Total GEF Resources($)	**12,544,037**	**1,128,963**	**13,673,000**

E. Project Preparation Grant (PPG)

PPG Amount ($)
300,000

PPG Agency Fee ($)
27,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Vanuatu	Biodiversity	BD STAR Allocation	75,000	6,750	**81,750**
UNDP	GET	Vanuatu	Climate Change	CC STAR Allocation	32,143	2,892	**35,035**
UNDP	GET	Vanuatu	Land Degradation	LD STAR Allocation	32,143	2,894	**35,037**
UNDP	LDCF	Vanuatu	Climate Change	NA	160,714	14,464	**175,178**
				Total Project Costs($)	**300,000**	**27,000**	**327,000**

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
Akula National Park	125689	Select				
Akula National Park 5000	125689	Select				

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park 2500	125689	Select							

Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
Akula National Park 2500	125689	Select				

Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park 2500	**125689**	**Select**							

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
7500.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
2,500.00			

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
2,500.00			

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
2,500.00			

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5,000.00			

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
10,000.00			

Indicator 5.1 Number of fisheries that meet national or international third party certification that incorporates biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Type/name of the third-party certification

Indicator 5.2 Number of Large Marine Ecosystems (LMEs) with reduced pollutions and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE

Indicator 5.3 Amount of Marine Litter Avoided

Metric Tons (expected at PIF)	Metric Tons (expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	134,194			
Male	138,265			
Total	272459	0	0	0

Part II. Project Justification

1a. Project Description

1A-1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

Development context: Vanuatu comprises over 80 islands, of which 68 are inhabited, and has a population of around 266,555 people (2016 Government of Vanuatu). Vanuatu has a land area of 14,760 km2 and a maritime exclusive economic zone of 680,000 km2. The country experiences severe tropical cyclones during the summer months of December to March. In addition, there are anomalously long dry spells associated with the El Nino-Southern Oscillation (ENSO). These climate risks combine with Vanuatu's frequent earthquakes, volcanos and seismic activity due to its location along the "Pacific Ring of Fire". According to the Commonwealth Vulnerability Index[1][1],Vanuatu is one of the world's most vulnerable country due to its high exposure to natural disasters, scattered island geography, narrow economic base, rudimentary 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. All the land area in Vanuatu is within 25 km of the coastline and can be considered as coastal. About 74% majority of the population is concentrated in the narrow strip of the coastal zone as many islands are volcanic with a mountainous terrain in the interior. Many island inhabitants live in rural areas and engage in subsistence, rain-fed agriculture on the coastal plains. Coastal fisheries contribute significantly to food security and over 49% of households are reported as engaged in fishing. 85% of rural households are engaged in livestock production. 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 for cyclones and other natural disasters.

1A-2) The baseline scenario and any associated baseline projects,

Most rural villagers' regular communication comes through public radio broadcasts. Telephone communications are improving with 86% of households with access to mobile phone network, which not all people can afford. These mobile networks are concentrated in most large islands, and in many small islands mobile reception may be patchy or non-existent. As most infrastructures (e.g. roads, buildings, power plants, industries, markets, and tourism facilities) are located in the coastal zone, there is potential for storms and challenges from climate change to severely endanger economic activity, the provision of social services, and human security. Around 30% of households have reported that the have had their dwellings completely damaged by a cyclone. The impact would be more felt in smaller islands which often have inadequate access to infrastructure.

Climate change context.

A robust assessment of potential climate changes in Vanuatu was undertaken by the Pacific Climate Change Science Program (PCCSP), led by the Australian Government in collaboration with the Vanuatu Meteorological and Geohazards Department (VMGD) of the Government of Vanuatu. In addition, the Risk Governance Assessment Report[2][2] in 2013 of the "Strengthening Climate and Disaster Risk Governance in Vanuatu Project" summarized key climate change findings as follows:

· Increase in daily temperatures is projected to be the same across all of Vanuatu for minimum, mean and maximum daily temperatures. Compared to 1995, by 2040 temperature will be higher by 1.2°C (global 1.9°C), and 2070 projected to be higher by 2.3°C (global 3.6°C);

· Increase in sea surface temperatures will bring the whole of Vanuatu in a zone where coral bleaching will be frequent (above 29.5°C);

· The change in precipitation is unclear: half the models project a change of less than 10% by 2040, while the other half projects a stronger change. This will pose challenges to planning and policy development. This uncertainty is much higher than the differences over the islands;

· Sea level is estimated to be currently increasing from CC by 6mm / year. Models simulate an increase of up to 15 cm by 2030, with increases of up to 60 cm indicated by 2090.

· Information on local vertical land movement is crucial. For Port Vila, an observed sea level increase of 159 cm is projected for 2100, when the observed sinking of 4.8 mm/year is taken into account;

· In 20 years' time it is projected that ocean acidification will have damaged 80% of the coral reefs around the world, including those in Vanuatu. Considering their crucial role for coastal protection, food security and tourism, this makes it one of the most significant impacts of climate change for Vanuatu;

· The extreme temperatures (including heat-waves) will reach higher levels and become more frequent. By 2040, the current 1-day maximum occurring once every 20 years will occur every other year;

· The duration of dry periods will become longer. The 1 in 5 year event will lengthen from just under19 days to 28 days;

· Extreme rainfall will become more frequent and intense. By 2040, the 1 in 100 year event will have increased 10-11%. This change is the same over all islands. Frequencies of current events will increase by 1.2 - 2.5%;

· Episodic high sea surface temperatures will increase from about 10% of the time currently to 25% of the time by 2040 (in Efate). This is different for different islands;

· Above projected climate change impacts may serve to exacerbate geophysical activities such as the vertical motion (subsidence/uplift) of Vanuatu archipelago of +/- 1cm per year.

Such changes will have a range of very significant impacts. These will include a decrease agricultural productivity, damage to coastal ecosystems and marine environments, accelerate coastal erosion, and affect the quality and availability of drinking water. There will be severe impacts on terrestrial environments and terrestrial biodiversity.

Higher ocean surface temperatures will lead to severe coral bleaching and affect the reproductive potential or corals and reef fish species. It may also create conditions favourable for algal blooms and increase the severity of ciguatera fish poisoning. Acidification of the oceans due to climate change will result in damage to the marine ecosystem, particularly reefs. Furthermore, sea-level rise may enhance salt-water intrusion into the shallow ground water lenses on small islands and increasingly lead to diminution of lowland areas. Changed weather patterns are projected to be likely to increase the incidence of malaria and other infectious water borne diseases.

Historical events appear to support the potential impact of 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 cyclones occurs in the vicinity of Vanuatu as it is one of the primary cyclone paths, experiencing cyclonic activities nearly every year.

In 2015 Tropical Cyclone Pam impacted on Vanuatu and is regarded as one of the worst natural disasters in the history of the country. This cyclone was the second most intense tropical cyclone of the south Pacific Ocean in terms of sustained winds. Up to 16 people lost their lives either directly or indirectly as a result of Pam with many others injured. Thousands of homes, schools and buildings were damaged or destroyed, with an estimated 3,300 people displaced as a result. Other serious cyclones to impact on Vanuatu include: Uma in 1987; Betsy in 1992; Prema in 1993; Dani in 1999; Sosé in 2001; and Ivy in 2004. While climate change impacts do not predict an increase in cyclone frequency around Vanuatu, it is anticipated that cyclones will increase in intensity.

The Vanuatu Infrastructure Reconstruction and Improvement Project (VIRIP) is seeking to to reconstruct and/or improve the disaster and climate resilience of selected public sector assets in provinces impacted by Tropical Cyclone (TC) Pam, and to provide immediate and effective response to an Eligible Crisis or Emergency. The MIPU and the World Bank are implementing this $50 million project (2016-2022) to contribute to Road reconstruction and improvement for roads works affected by TC Pam to undertake spot improvements to road assets, such as small road structures and footpaths, and to improve the resilience of road assets; School reconstruction and improvement based on the extent of damage from TC Pam to more than 70 primary and secondary schools in cyclone affected areas; Public building reconstruction and improvement several public buildings, provincial and national government offices, workshop and associated buildings on TC Pam-affected islands that suffered serious damage; the project is working in Ambae, Malekula; Tanna and Efate.

The Project “Climate Information Services for Resilient Development in Vanuatu (VANKIRAP)” is supporting Climate Information Systems (CIS) for 5 key sectors: tourism, agriculture, infrastructure, water & fisheries. To enhance utility of CIS, capacity to use CIS by national development agents, to enhance CIS communications, knowledge products, tools, and resources; and to improve information sharing and data management. This Green Climate Fund (GCF) project is contributing US $22.95 million to support these efforts between 2017 and 2021. This project aims to address key climate change vulnerabilities and support climate resilient development through the delivery of tailored CIS, with a focus on 5 priority development sectors. Effective delivery will require that key barriers to uptake are addressed and that CIS products and services are relevant, practical. In particular this provide will support: Capacity development activities; CIS development case studies; Suite of customized communication, capacity development and outreach resource materials including communication and media products, training materials, climate management tools; New weather and climate infrastructure for enhancing

development and delivery of CIS in Vanuatu; 5. Digitised and quality controlled observational and related/ancillary socio-economic data secured and accessible within functional CDMS; and Down-scaled and/or regionally specific CLEWS, sub-seasonal/seasonal forecast and long- term projections data and information tailored to sectoral needs. SPREP is assisting in implementation of this project.

The impacts of climate change described above will have serious consequences on the coastal environment in Vanuatu. The bio-geophysical effects include coastal and inland erosion, increased flooding, loss of coastal lowlands and wetlands and salinization of surface and groundwater. The loss and degradation of coastal wetlands will 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.

Adding to Vanuatu's physical characteristics, other conditions contribute to the country's vulnerability:

A narrow economic base and a weak developing economy. Vegetable crop production is undertaken by 88% of all households in Vanuatu and 97% of rural households. 74% of rural households rely upon agriculture for cash crop production. Sixty percent of rural households engage in fishing. The local market is small. The growing tourism sector, with 115,634 arrivals in 2018[3][3] mainly around Port Vila, is the main foreign exchange earner. This narrow economic base makes the cash economy particularly vulnerable to disruption by natural disasters.

· Weak inter- and intra-island communication and transport networks. Well-developed road transport exists only near population centers (just 111 kilometers of roads are sealed), mostly on the larger islands. While air service is daily to the main islands, there are only 5 airports with sealed runways (out of 29 in total).

· Wide dispersal of 80 islands spread over a huge 680,000 km2 with many areas of the country isolated and extremely vulnerable in the event of disaster.

The Risk Pacific Catastrophe Risk Assessment and Financing Initiative (2015)[4][4] - Vanuatu Country Profile notes the following:

· Vanuatu is susceptible to a variety of both hydrometeorological and geophysical disasters due to its location in the South Pacific tropical cyclone basin and the Pacific Ring of Fire.

· Vanuatu should refine its disaster financing to provide a muchneeded boost to the current limited response funds. Vanuatu has a maximum of US$16.6 million available in ex-ante instruments for financing disaster-related losses.

· Vanuatu uses a variety of disaster risk financing and insurance (DRFI) tools, but its available funds are limited.

· A number of options for DRFI include: (a) develop an integrated disaster risk financing and insurance strategy; (b) develop a post-disaster budget execution manual to minimize the loss of institutional knowledge should personnel leave DoFT; and (c) explore the use of contingent credit to access additional liquidity post-disaster.

In summary, the costs of climate change impact in Vanuatu are high. If more cyclones follow the path that Pam took in 2015, people's livelihoods, as well as the larger economic development of the country, will essentially come to a halt as government will be forced to focus on recovery rather than development efforts. The cyclone affected nearly 100,000 people and caused destruction in the hundreds of millions of dollars (US$). The study by SOPAC 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 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.

Environment and Natural Resource Context

Vanuatu's National Biodiversity Strategy and Action Plan 2018-2030 (NBSAP) notes Vanuatu is within the East Melanesian Islands Biodiversity Hot Spot region that needs attention for the protection of its unique flora and fauna. Vanuatu has a number of endemic plant and animal species that are not found elsewhere and some are at risk of becoming extinct if measures are not continuously taken to protect them.

The NBSAP notes that Vanuatu's biodiversity remains poorly known, with detailed studies of only a few genera and few studies of the biota of smaller or less accessible islands. However, a review of studies of the flora and fauna of Vanuatu has shown that there are endemic species, rare species and uncommon variants within many of the genera that have been studied in detail. Much of Vanuatu's diversity beneath the species level has only been classified by indigenous knowledge systems that vary from one language group to another and are not documented.

Patterns of species diversity reflect classic island biogeography, where island size and distance from continental source are key determinants of number of species. The larger and older islands generally support a greater diversity of terrestrial ecosystems, and a greater diversity of plants and animals (Taiki et al., *Unpublished*). The islands are separated by the sea, and catchments and lowland habitats are separated by mountains – these are barriers to many species, and produce conditions whereby relatively rapid sub-speciation and speciation occurs. Altitudinal gradients provide opportunities for montane endemics, such as the Mountain Starling (*Aplonis santovestris*) of Santo, which add diversity to high

island faunas that is not possible on low islands no matter how large they are. Frequent disturbance due to tropical cyclones, earthquakes and volcanic activity also affects the distribution and abundance of species, especially on the smaller islands. Lastly, there is significant variation with latitude, with species that occur at high altitudes in the tropical north occurring at much lower altitudes in the sub-tropical south. Consequently, there is considerable variation in the distribution of species within and between islands, and Vanuatu's biodiversity is of particular interest for its on-going processes of immigration, range extension and contraction, and sub-speciation (Department of Environmental Protection and Conservation, 2014).

The greatest threats to biodiversity conservation result from human activities. Human settlements are generally found concentrated in the coastal lowlands. Consequently, biodiversity is most at risk in lowland and coastal areas and small islands, yet remains relatively intact in the high-altitude forests of larger islands.

Land cannot be alienated from the traditional landholders, but can be leased from the landholders for fixed periods and agreed purposes. This system of land and resource management limits the capacity of government to conserve biodiversity without the support, understanding and commitment of landholders. This therefore, creates an imperative for landholders as resource owners and managers to work independently or in cooperation with other landholders, organisations or government to conserve biodiversity.

The 2010 Vanuatu National Assessment Report notes that Vanuatu's environment quality is rapidly deteriorating. It lists increasing frequency and severity of natural disasters, including cyclones, flooding and coral bleaching; and deforestation, air, land and marine pollution as growing problems. The assessment observes that population growth leads to more pressure for food and investment resulting "not only in land degradation and overfishing, but also destruction of mangroves and fish breeding areas" (GOV, 2010). Invasive Alien Species (IAS) is an existing and growing concern, threatening forests and biodiversity of Vanuatu. The direct effects of climate change and their interactions with the current threats will only exacerbate the risks to biodiversity. These pressures work singly or in tandem with each other in complex ways.

Seventy four percent (74%) of land in Vanuatu is covered with natural vegetation. Forest types include tropical lowland evergreen rain forest, broad-leaved deciduous forest, closed conifer forest, montane

rain forest, cloud forest and coastal forest. Other notable vegetation includes swamp forest on Efate, kauri pine strands on Erromango and scattered mangrove forests covering around 3,000 ha (most of which occur on Malekula Island).

Lowland forest has largely been cleared and replaced by anthropogenic vegetation but forested areas remain the dominant landscape element on most islands. High forests are restricted on most of the islands (especially those that are densely populated, such as Pentecost, Ambae, Tanna and Shepherd; or have active volcanoes, such as Ambrym). However low montane forests are generally well preserved and occupy large areas. Secondary forests (often consisting of a Hibiscus community) are dense and extensive in Vanuatu.

The forests of Vanuatu have been impacted by human activities, which have diminished and altered forest cover and biodiversity. There has been immense pressure on some timber species on the larger islands, where harvesting is concentrated. In 1998, for instance, 92% of logs harvested were of just two species, *Endospermum medullosum* (Whitewood or Basswood), and *Antiaris toxicaria* (known in Vanuatu as Milk Tree) (Bakeo and Qarani, 2005).

Agriculture, Fishing and Forestry has recovered from a decline in 2015 by registering a positive growth of 5.1%; an increase of 10.7 percentage points. The components of agriculture that contribute to this positive growth, were crop production, it grew by 5.9%, followed by animal production at 2.6%, fishing at 3.9% and forestry at 0.7% (Vanuatu National Statistic Office, 2017). In the mid-2000s, natural forest cover in Vanuatu was estimated at 444,000 ha, equivalent to 36% of the total land area (1.22 million ha) (FAO, 2010), and at least 40% of the commercial forest area was regarded as degraded (King, 2007). Most of the high value forests were over-exploited in the 1980s and 1990s, until the government imposed a ban on the export of round logs in 1998. However, large scale logging has been banned since the late 1990s. Many landowners have used their logged forest lands for alternative activities like commercial agriculture

The EU-ACP Biodiversity and Protected Areas Management (BIOPAMA) programme will continue to support implementation of the NBSAP and protected areas management in Vanuatu. BIOPAMA is jointly implemented by the International Union for Conservation of Nature (IUCN) and the Joint Research Centre of the European Commission (EC-JRC). In the Pacific region, BIOPAMA is implemented by IUCN's Oceania Regional Office (IUCN ORO) in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP). The partnership between IUCN ORO and SPREP has seen the enhancement of the Pacific Islands Protected Area Portal (PIPAP), the 'one-stop shop' for all information on Protected Areas maintained by SPREP with partners and Members.

Nia Tero will be working on Vanuatu on the island of Santo, in the Santo mountain range which is also a KBA for Vanuatu. They will work with Local NGO's and communities to support their community initiatives for conservation. The project should start by early 2020. This initiative has a budget of approximately $60,000.

Vanuatu's marine and coastal biodiversity contributes to generating goods and services that people value. Vanuatu has a range of marine habitats and species, from inshore coral reefs to deepwater seamounts and canyons that generate these values.

Vanuatu's coral reefs are categorised as either fringing, barrier or atoll reefs. These areas are listed as globally threatened due to reef damage and bleaching, and will suffer additional impacts from sea temperature and pH changes associated with climate change. Coral reefs are also the habitat for most of the threatened coastal fishes of the region, such as Humphead Wrasse (*Cheilinus undulatus*), Green Bumphead Parrotfish (*Bolbometopon muricatum*) and Hump-backed Rock Cod (*Cromileptes altivelis*). Seagrass beds occur in soft-bottom areas and, like coral reefs, require clear water (low turbidity) away from sediment plumes of large rivers. Seagrass beds are the habitat of Dugong (*Dugong dugon*), which reaches the eastern limits of its distribution in Vanuatu.

The Department of Fisheries is implementing a number of specific initiatives for the further development of sustainable coastal fisheries and support the creation of community managed marine areas. These are supported by initiatives including the JICA funded project for the Promotion of the Grace of the Sea in Coastal Villages Phase 3 and the provision of Advisors for Livelihood Improvement through Community-based Coastal Resource Management and Utilization.

The Australian Government through the Australian Centre for International Agricultural Research is supporting a project titled "Strengthening and scaling community-based approaches to Pacific coastal fisheries management in support of the New Song". The objectives of this project is to enhance food security, sustainability and human wellbeing achieved through improved governance and management; Increase capacity in research and management in national and sub-national agencies and in communities; and policy outcomes including improved sub-national and national law and policy, and integration of fish into rural development policy through whole-of-government approaches to nutrition outcomes.

The By-catch and Integrated Ecosystem Management (BIEM) coordinated in the region by SPREP has a value of 90 Million Vatu ($750,000). This project will work predominantly in 3 sites in Vanuatu to strengthen bi-catch mitigation and coastal fisheries management.

Dugong are protected in Vanuatu under the Fisheries Act 2014, which prohibits the capture of marine mammals in Vanuatu's international waters. Dugongs were formerly hunted but their numbers are so low now that there are few contemporary records of hunting. Mangroves are a marine habitat and widely recognised as an important nursery for juvenile fish. They also provide coastal buffering against tropical cyclones and other extreme weather events. As with terrestrial forests, mangroves and seagrass meadows remove and store carbon from the atmosphere.

While the oceans offer great potential in terms of sustainable economic development, they are also under increasing pressure from many uses and impacts. Changes in the marine environment resulting from human activities are occurring faster than previously anticipated, affecting, especially, vulnerable marine ecosystems such as coral reefs. Major threats to the marine ecology include: impacts associated with climate change including rising ocean temperatures, acidity and sea level rise; coastal and offshore developments (e.g. from Deep Sea Mining, shipping) and the destruction of marine ecosystems such as coral reefs and mangroves; unsustainable and destructive fisheries practices; pollution from land-based and offshore sources including from ships and damage from shipwrecks;; conflicting uses and the increasing intensity of hurricanes and other storm events, as recently experienced.

Many stretches of coastline, notably some important tourism areas within Vanuatu, have experienced dramatic rates of coastal erosion with considerable economic costs to owners and the nation. Nevertheless, significant areas remain relatively pristine and are targeted for tourism and other development.

The marine environment's ability to maintain its diversity and productivity, and to provide a wide array of valuable services to people, is therefore increasingly being compromised. Designing and implementing effective governance and management strategies is critical to address the challenges posed by the increasing impacts of human activities on the marine environment and to ensure the effective management and sustainable use of living and non-living marine resources (Vanuatu's National Ocean Policy, 2017).

Governance context.

"Vanuatu 2030" is the National Sustainable Development Plan (NSDP) for the period 2016 to 2030. It serves as the country's highest-level policy framework. It builds upon the Priorities and Action Agenda 2006-2015. This plan seeks to further extend the linkages between resources, policy and planning to the people.

Environment is one of the three pillars as part of the NSDP. These environment pillar has five goals and 29 policy objectives with 62 indicators and 64 targets. V-CAP II is aligned to address the Environment Goals 2,4 and 5 as outlined below. Environment goal 3 – Climate and disaster resilience - A strong and resilient nation in the face of climate change and disaster risks posed by natural and man-made hazards ENV 3.1 Institutionalise climate change and disaster risk governance, and build institutional capacity and awareness ENV 3.2 Improve monitoring and early warning systems ENV 3.3 Strengthen post-disaster systems in planning, preparedness, response and recovery ENV 3.4 Promote and ensure strengthened resilience and adaptive capacity to climate related, natural and man-made hazards ENV 3.5 Access available financing for climate change adaptation and disaster risk management. In addition, Environment Goal 4 on Natural Resource Management and Environment will contribute to ENC 4.1 Strengthen local authorities and municipal planning authorities to enact and enforce land use planning laws and regulations ENV 4.2 Protect vulnerable forests, watersheds, catchments and freshwater resources, including community water sources ENV 4.3 Prevent land degradation and downstream environmental damage from mineral resource extraction ENV 4.4 Promote the sustainable development of the fisheries sector that values the protection and conservation of marine and freshwater resources ENV 4.5 Reduce and prevent the degradation and erosion of foreshore and coastal areas ENV 4.6 Reduce deforestation and ensure rehabilitation and reforestation is commonplace ENV 4.7 Build capacity and support local communities to manage natural resources. In addition, Goal 5 on Ecosystems and biodiversity will be implemented ENV 5.1 Protect biodiversity and ecosystems and their significant role in our culture, society and environment ENV 5.2 Create and manage conservation and protected areas ENV 5.3 Support local conservation and protection of endangered, threatened or endemic species and ecosystems including though traditional knowledge and practices ENV 5.4 Protect our borders and environment through effective customs and biosecurity services ENV 5.5 Increase awareness on biodiversity conservation and environmental protection issues across government and publicly ENV 5.6 Enhance environmental monitoring, evaluation and research with relevant, open and transparent data sharing among relevant agencies

The Government of Vanuatu has been proactive in global and regional dialogues on climate change and finalised its National Adaptation Programme of Action (NAPA) in 2007. The project will explicitly address four of eleven priorities identified in the NAPA including: 1) community-based marine resource management, 2) integrated coastal zone management, 3) Land use planning and management; and 4) mainstreaming climate change into policy and national planning processes. The NAPA places particular emphasis on the need for community-based resource management, embracing both traditional and modern practices and enhancing the resilience of vulnerable communities. To address these

priorities, the project will focus on adaptation options outlined in the NAPA including: i) development of provincial / local adaptation and ICM plans, ii) climate proofing of infrastructure design and development planning, iii) development of an efficient early warning system, iv) Landslides associated with prolonged and intense rainfall, iv) awareness raising and capacity building, and v) coastal re-vegetation and rehabilitation.

Vanuatu has responded positively to the climate change challenges. It has established the Ministry of Climate Change Adaptation (MCCA), Meteorology & Geo-Hazards, Energy, Environment and National Disaster Management Office. This Ministry draws together key agencies working directly on climate change adaptation and mitigation.

In addition, a coordination mechanism has been established through the National Advisory Board for climate change (NAB). This has strengthened the governance structure over CC adaptation, DRM and DRR initiatives in the country. The secretariat of NAB is based in the Department of Climate Change based at the Ministry. Vanuatu's National Advisory Board on Climate Change & Disaster Risk Reduction, mandated by the Council of Ministers on 15 October 2012 to "Act as Vanuatu's supreme policy making and advisory body for all disaster risk reduction and climate change programs projects disaster risk reduction and climate change programs, projects, initiatives and activities." It fulfils this mandate by:

- Integrates the governance of climate change & disaster risk reduction across whole of Government
- Supports the development of CC/DRR policies, guidelines and positions
- Advises on international and regional DRR and CC obligations
- Facilitates and endorses the development of new DRR & CC programs, projects, initiatives and activities
- Acts as a focal point for information - sharing and coordination on CC/DRR
- Guides and coordinates the development of national climate finance processes

The NAB is chaired by the Directors General of the Ministry of Climate Change & the Prime Minister's Office. Members are senior-level representatives from sectoral government agencies, CSO representatives, and technical advisors.

There is a 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.

The Department of Environmental Protection and Conservation (DEPC) began as the Vanuatu Environment Unit in 1986. DEPC is recognised as a department under the Ministry of Climate Change Adaptation, Meteorology & Geo-Hazards, Environment, Energy and Disaster Management. In 2002, the Government of the Republic of Vanuatu passed the *Environmental Management and Conservation Act No. 12 of 2002*, *now the Environmental Protection and Conservation Act [CAP 283] (the EPC Act)*. The EPC Act formally established DEPC in legislation and outlines its role in the development, coordination and implementation of the Government's environmental policies and programs.

The DEPC is responsible for the implementation a range of strategies and plans including:

- Vanuatu National Environment Policy and Implementation Plan 2016–2030;
- National Invasive Species Strategy and Action Plan 2014-2020;
- Vanuatu National Biodiveristy Strategy and Action Plan (NBSAP 2018-2030).

The NBSAP outlines specific links to the NDSP and ensures alignment in the delivery of Government efforts for both environment management and sustainable development. The NBSAP has 7 strategic areas for delivery. This VCAP II will support the delivery of the NBSAP, in particular contribute to:

- Strategic Area 1: Conservation Area Mangement (terrestrial and marine)– increase the area of representative coverage of Protected Areas (PAs) in Vanuatu in the form of community conservation areas (CCAs);
- Strategic Area 2: Forest and inland water ecosystem conservation and management
- Strategic Area 3: Coastal and marine ecosystems conservation and management (CME)
- Strategic Area 5: Management of invasive alien species (MIAS)
-

The DEPC will play an important role in the delivery of VCAP II. This will involve leading on working with communities for the establishment and management to establish Community Conservation Areas and support specific elements of NBSAP implementation in line with the NSDS.

The Vanuatu Climate Change Finance Review Final Report was released by the Government of Vanuatu in June 2018. This assessment will be useful in the development of V-CAP through the project preparation phase. Of special note is the Policies and Planning Analysis highlighted the following elements as priority approaches for the delivery of climate change projects:

1. Utilise the Vanuatu's National Sustainable Development Plan (NSDP) M&E framework to guide the development of an aligned M&E framework for the Climate Change and Disaster Risk Reduction (CCDRR) policy, as a project management tool that includes and recognises the role of all actors and ensures all stakeholders are informed of the process.

2. As part of the CCDRR Policy Framework, ensure a process to track the integration and implementation of relevant CCDRR activities within other sectoral policies.

3. Strengthen sectoral policy inclusion of CCDRR to mainstream CCDRR as a cross-cutting priority issue

4. Progress with the development of a data management system within MCCA to provide necessary support for developing M&E processes and more efficient reporting.

5. Ensure consideration of the Climate Public Expenditure and Institutional Review (CPEIR) recommendations relevant to the development of a National Adaptation Plan (NAP). In particular, the need to ensure community engagement and identification of local level adaptation priorities within national processes, as well as comprehensive gender and social inclusion processes. The NAP process must be inclusive and be transparently led by the NAB and build on other planning processes such as the Nationally Determined Contributions (NDC), Vulnerability Assessment Framework (VAF) and Country Program under the Readiness Program and provincial strategies and plans

These important efforts for provision of a policy framework will be strengthened by suitable frameworks for sustainable development. This will include integrated and comprehensive sectoral polices and plans. Example include 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 is important that other acts, e.g. *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* are updated to ensure integration of climate change adaption.

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 to 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.

All "investment mobilized" were taken from known and programmed allocation of grant funds to the Government of Vanuatu to support climate change adaptative, biodiversity conservation and sustainable land management initiatives identified in consultation with the government, CSO and other sources. Related co-financing letters will be provided during the PPG phase.

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.

A number of barriers have constrained implementation of comprehensive approaches to climate change adaptation in coastal areas of Vanuatu. These constraints, along with remedial actions to be undertaken by the project include:

· Limited useful information on the health of coastal ecosystems and a monitoring system to determine the status of marine ecosystems including coral reefs and mangroves as basis for monitoring impacts of climate change in Vanuatu. Given the increasing surface temperatures and the reliance of local communities on marine resources for their daily survival, this is essential. *V-CAP II will continue to develop solid ecosystem health baselines including climate change resilience indicators for each of the target V-CAP II sites.*

· Fragmented, single sector development efforts (including donor funded initiatives) across different landscapes and government levels often do not include needed spatial management techniques and are hindered by unclear institutional responsibilities, weak policies, communication & coordination.However, this is improving and *V-CAP II will seek to support an integrated planning and delivery mechanism that demonstrates best-practice in supporting efforts of appropriate agencies and institutions.*

· Limited experience and capacity in linking sustainable land management in watersheds (IWRM, SLM, SFM and managing upland erosion issues) and intergrating Community Conservation Areas (CCAs) with both the marine environment and related livelihood needs of downstream coastal residents through approaches. *V-CAP II will seek to strengthen integration of these approaches through a Reef to Ridge approach.*

· Lack of deployment of CCADRR models to the local level – in particular to isolated rural communties. Lack of capacity, for comprehensive implementation of climate change adaptation as a fundamental part of Decentralization Act mainstreaming in Community and Area Council Plans, with linked financial flows to support CAA and DRR activities. *V-CAP II will continue to work with the DLA to ensure Area Councils within the project's target sites to develop sustainable development plans incorporating CCA components, which build upon village level plans created by CDC's (Community Disaster Committees).* These V-CAP II project sites will serve as models for other Area Councils to pursue similar planning initiatives that consider CCA.

· Few demonstrations of holistic and comprehensive community-level climate change adaptation planning based on comprehensive vulnerability assessments, with associated plans for coastal management, DRR and upland watershed management, water resource management, with secured funding for comprehensive implementation. Often plans are developed for individuals sectors, i.e. DRR or coastal management without linkages to community development plans. V-*CAP- II will continue to develop an integrated community level planning framework with strong emphasis on the integration of climate change resilience to support governance, eco-system based management and sustainable livelihoods.*

· Project delivery mechanisms often bypassing, or without appropriate linkages, to provincial and local level administrations in the delivery of technical assistance and community support. *V-CAP II will continue to demonstrate for integrated project delivery supporting at every level national government frameworks and recognising appropriate levels of responsibility and authority.*

· Lack of integration of traditional knowledge in approaches to disaster reduction, environmental management and responses to climate variability by local communities. *V-CAP II will recognise and build upon traditional knowledge and integrate appropriate approaches in the identification and application processes and plans to build resilient communities.*

· Limited recognition of the role of "soft" engineering solutions such as erosion control, river bank management combined with "hard" engineering solutions to increase the useful life of public conveyance infrastructure while reducing long-term maintenance funding requirements of said infrastructure. *V-CAP II will continue to promote "soft infrastructure" solutions as models for other locations in Vanuatu.*

· Where successful practices have been trialed, often trials have not been scaled-up or replicated due to lack of resources or progressed. *V-CAP will seek to build upon the models developed by various development partners, (GIZ, FAO, Research Centres, BOM, NZ Met Service, IRD, and other related agencies) and provide communities with the knowledge and opportunities to expand these model approaches*.

· Severe shortage of government extension services (agriculture, fisheries and forestry workers) at the community level, especially in isolated areas has severely restricted community knowledge and use of agriculture, farming and fisheries climate change adaptation strategies. *V-CAP II will continue to support technical agencies in the delivery of extension services on the ground through the demonstration of integrated, long-term and sustainable approaches.*

· Limited quality of information available on early warning systems for climate related events, and a lack of distribution of this information to isolated island communities. *V-CAP will contibue to contribue to the collection of high-quality data and using in-house expertise will develop high-quality early warning systems for the broader Vanuatu populations – with a particular focus on isolated island communities;*

· Limited access to human resource development opportunities, including education and training, especially at local levels. *V-CAP will continue to support comprehensive capacity building at the local, Area Council, Provincial and National levels.*

V-CAP II will comprehensively address four of eleven priorities identified in the NAPA. These include i) Land use planning and management (integrating community conservation areas), ii) community-based marine resources management; iii) integrated coastal zone management; and iv) mainstreaming climate change into policy and national planning as outlined in the table below. Further, 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. In addition, it will complement NAPA priority 3 in scaling up and distributing results of climate proofing agriculture and will enhance approaches to water management as identified as NAPA priority 4.

To address these priorities, V-CAP II will target a number of adaptation options outlined in the NAPA including: development of local adaptation and ICM plans, climate proofing of infrastructure, development of an efficient early warning system, awareness raising and capacity building, and coastal re-vegetation and rehabilitation. Such adaptation activities will help to promote food security, which the NAPA defines as an overarching goal of all adaptation activities. V-CAP II adopts cross-sector and participatory

approaches to promote action and learning at multiple levels. These approaches are also important in accounting for interaction between human activities, ecosystems, and biophysical processes.

A key underlying principle in the delivery of V-CAP II will be to continue to build on existing coping strategies of rural communities who have a long history of responding to geological and climate variability and change, with varying success. These short-term coping strategies form the basis of successful long-term adaptation strategies. However, care needs to be taken as some of these traditional coping strategies could prove to be unsustainable over time as climate change progresses leading to a greater risk of maladaptation. Innovative approaches and new technologies, along with careful monitoring of the effectiveness of strategies in view of changing circumstances is needed to ensure these adaptation strategies remain appropriate. Rural communities are therefore the key actors for implementing adaptation strategies and hard-won lessons can be learned, communicated and fed into adaptation decision making at higher levels to benefit the nation.

The V-CAP II approach will seek to represent a comprehensive approach to CCA by encompassing communities, area councils and provincial and national mechanisms. In this way V-CAP is not a standalone project, but rather supports existing government plans, policies and procedures with the long-term objective of building local and national level capacity and expanding this approach to other programs.

1A-3) the proposed alternative scenario with a brief description of expected outcomes and components of the project;

As indicated in the above, this proposal is the second phase of V-CAP. The draft Terminal Evaluation from VCAP I has a number of recommendations. They can be found in the Terminal Evaluation report. However, the conclusion of the TE noted “The project has resulted in a lot of benefits and it will rely on other projects to replicate and further upscale to a more significant level. A follow-up intervention is recommended to further secure the investment made by the GEF, Government and UNDP.” VCAP II is the follow-up interventions.

The proposed alternative scenarios with a brief description of expected outcomes and components is outlined below. It will be further refined in the PPG phase of the project.

Component 1: Integrated community approaches to climate change adaptation:

V-CAP II will focus on the delivery of fully integrated approaches to coastal community adaptation that build resilience to climate change in Area Councils in all six-provinces of Vanuatu. These sites will demonstrate fully integrated planning, implementation and monitoring processes from community to Area Council level, that are effectively linked with provincial development planning processes.

Through a comprehensive selection process in the project preparation phase select six target areas for V-CAP II implementation will be identified to support building resilience to climate change resilience. This comprehensive site selection process will be based on the outcomes of V-CAP-1, lessons learnt and the government priorities for V-CAP II delivery. An initial site lists is presented below, which will be refined though screening with senior officials at the PP Inception Workshop and finally through consultations with provincial and national authorities. The initial proposed sites are below, however these are only considered to be indicative at this stage.

Island Grouping	TBC	Santo (TBC)	Pentecost or Maewo (TBC)	Tafea Outer islands	Malekula (TBC)	Torres (TBC)
Area Councils (AC)	Area Councils	Area Councils	Area Council	Area Councils	Area Council	Area Council
Focus – types of Area Council	- Isolated island group - Non-urban	- Isolated area council with resilience and communication challenges	- Isolated area council with resilience and communication challenges	- Small island area councils - Isolated islands	- Isolated area council with resilience and communication challenges	- Isolated area council with resilience and communication challenges
Importance for biodiversity	- To be qualified and quantified during project preparation	- To be qualified and quantified during project preparation	- To be qualified and quantified during project preparation	- To be qualified and quantified during project preparation	- To be qualified and quantified during project preparation	- To be qualified and quantified during project preparation
Major marine and coastal CCA threats	- Ecosystem degradation - COTs - Overfishing - MPA / CCA support	- Ecosystem degradation - erosion - Water pollution - Overfishing - MPA / CCA support	- Ecosystem degradation - Water pollution - Overfishing - MPA / CCA support	- Ecosystem degradation - Overfishing - MPA / CCA support	- Coastal erosion - Overfishing - COTS - MPA / CCA support	- Species management - Overfishing - MPA / CCA support

Major upland CCA threats	- Water supply - Erosion - Sediment run-off - Lack of Protected Areas - Agriculture diseases	- Severe erosion - Upland erosion and water quality - Agriculture diseases - Lack of Protected Areas - Catchment management	- Severe erosion - Upland erosion and water quality - Agriculture diseases - WASH	- Severe erosion - Upland erosion and water quality - Agriculture diseases and introduced pests	- Severe erosion - Water quality - Agriculture diseases - Increasing population / re-location	- Upland erosion and water quality - Agriculture diseases - Alien species / pests
Major investments for climate proofing of infrastructure (examples)	- Roads - Bridges - Water crossings - Water supply and WASH	- Pedestrian crossings on major roads	- Road rehabilitation - Major rehabilitation of walking tracks	- Climate proofing of walking tracks	- Rehabilitation of roads - Walking tracks	- Water catchment

The Area Councils will be the focus of V-CAP II implementation. Initial vulnerability assessments during the PP will support Area Council based climate change adaptation planning through a more detailed vulnerability assessment process. This will form the basis for detailed and holistic climate change adaption planning and implementation to be integrated into village level development planning. Vulnerability assessments will focus on identifying the key risks facing communities in relation to climate change.

At the village level, Community Disaster Committees (CDC's) — grassroots level committees recognized by the national government through the National Disaster Management Office — will be utilized to integrate CC adaptation components to the community's existing Disaster Risk Reduction (DRR) plans. Similarity, the Water Committee will be link to provide inputs into Water Plans.

A Strategy will be developed in a holistic manner to address both the threats to climate change on the natural resources that communities depend upon, and will focus on a number of different elements including upland management, management of water and water sources, coastal and marine area management, community conservation areas, DRR and management of infrastructure. In some villages physical planning to address household and community infrastructure in areas classified as highly vulnerable to CC will also be undertaken.

The holistic planning process used to develop CCA Strategies will also address the need to link with the village committees to ensure an integrated community development approach. Because CC adaptation strategies will be developed with specific targets, indicators and outputs to ensure their effective delivery, this will serve to build the capacity of other local committees whose members participate in clilmate change adaptation planning processes.

At the Local Area Council technical support will be provided with a specific focus on building the capacity of the Local Area Secretary and Administrator to develop an Area Council Adaption Strategy (Development Plan). This Area Council-wide strategy will be developed through an integrated "bottom-up" process and will be based on the priorities developed in the local (village) development plans. The Area Council Development Plans will inform the allocation of funds provided to the Area Council through the Province allocated under the Amendment to the Decentralisation Act 2013. It will provide clear plans for the use of the funds and will also inform other development partners of funding priorities in targeted communities.

A healthy and productive ecosystem will contribute to climate resilience. Some of the major environmental problems facing Vanuatu are land degradation, biodiversity loss – both terrestrial and marine, and reef destruction. These problems severely undermine prospects for sustainable development, including food security, which situation underscores the need for immediate action. Clearing of upland forest for agriculture, mangrove forests for housing, coastal exploitation and sand mining also increase the vulnerability of important infrastructure by accelerating erosion and eliminating the natural buffers afforded by nature. In many sites infrastructure needs immediate maintenance and climate proofing to withstand climate- induced cyclones, floods, sea level rise, and high intensity rainfall.

Water resources management and supply rely on the effective mangegement of water resources and water catchments. This links directly to catchment management and watershed protection. In some areas communities require supplementary assistance to provide water year round due to changing rainfall patterns.

General road maintenance is often lacking as a result of inadequate resources, in terms of equipment, labour and materials, and budget allocations. The maintenance of roads is particular 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.

The effective implementation of the NBSAP will contribute to building resiellience to climate change. The NBSAP will be implemented thorugh partnerships with communities through their provincial government and administration in collaboration with DEPC and national level stakeholders.

The NBSAP provides six provincial implementation plans which detail the background of each province, the population, and total land and sea areas under provincial management. It then provides the provincial vision and mission of the whole province. The priorities focus on:

- A. MARINE:
  - (i) Existing conservation areas,
  - (ii) Proposed conservation areas,
  - (iii) Marine biodiversity,
  - (iv) Threat to marine species,
  - (v) Action to address threats.
- B. FOREST AND INLAND WATERS
  - (i) Existing conservation areas,
  - (ii) Proposed conservation areas,
  - (iii) Forest and inland biodiversity,
  - (iv) Threat to forest and inland species,
  - (v) Action to address threats.
- C. PROVINCIAL TARGET FOR 2018 -2030

The following provincial NBSAP Implementation plans were developed through an extensive consultation process based on the current NBSAP.

- Torba Province– NBSAP Implementation Plan
- Sanma Province - NBSAP Implementation Plan
- Penama Province - NBSAP Implementation Plan
- Malampa Province - NBSAP Implementation Plan
- Shefa Province - NBSAP Implementation Plan
- Tafea Province - NBSAP Implementation Plan

The NBSAP proposes the establishment of action for land degradation and both formal and informal protected area establishment. The proposed sites for listing as formal protected ares are outlined in pages 108-172 of the NBSAP. The full list of sites will not be repeated there. But targets to 2030 are summarised below.

Target 2018-2030 – Land and wetland	Formal recognition (sites)	16 sites	10 sites	6 sites + 8 site	14 sites	24 sites (11+13)	10 sites
	Informal recognition (community management) (sites)	12 sites	24 sites	8 sites + 1 site	4 sites		5 sites
List of potential sites		See NBSAP - 8.5.4.1 Forest and Inland Waters Targets	See NBSAP - 8.2.4.1 Forest and Inland Waters Conservation Areas Target	See NBSAP - 8.3.4.1 Existing Conservation Areas Target in Terrestrial and Marine AND 8.3.4.2 Forest and Inland Waters Area Target	See NBSAP - 8.6.4.1 Forest and Inland Water Target	See NBSAP - 8.4.4.2 Forest and Inland Waters Area Target	See NBSAP - 8.1.4.1 Forest and Inland Waters Target
Target 2018-2030 – Marine Areas	Formal recognition (sites)	21 sites	10 sites	6 sites	14 sites	8 sites	11 sites
	Informal recognition (community management) (sites)	4 sites	9 sites	3 sites	2 sites	1 site	10 sites
List of potential marine sites		See NBSAP - 8.5.4.2 Marine Area Target	See NBSAP - 8.2.4.2 Marine Targets Areas	See NBSAP - 8.3.4.3 Marine Areas Target	See NBSAP - 8.6.4.2 Marine Areas Target	See NBSAP - 8.4.4.3 Marine Areas Target	See NBSAP - 8.1.4.2 Marine Areas Target

The PPG phase of the VCAP II will explicitly identity priority sites through a process of alighnment of the prioritisation of the sites to address climate change adaptation challenges together with the NBSAP priority sites outlined above. The PPG phase will ensure at least 20% of all NBSAP PA target sites outlined in the table above will be incorporated into the sites selectioned for VCAP II implementation. In addition, options for building on VCAP Phase I sites for listing as CCAs can be considered. At this stage of project development, it is not possible to consult with all landowners to determine their commitment to undertake either formal listing of Protected Areas or establishment of CCAs – this will be undertaken in the PPG phase.

The development of a fully integrated approach to enhancing resilience of communities and the land, coastal and marine resources, and related infrastructure will be highlighted as elements of the overall Area Council Development Plans. V-CAP II will provide support to mobilize the development of resilience in upland and coastal areas through a variety of measures and through the climate-proofing of infrastructure.

V-CAP II will focus in Output 1.2.1 by working on upland areas where local communities live, rely upon land for farming and which provide water for household use. In addition, these areas provide ecosystems for Vanuatu's critically important biodiversity. VCAP II will seek to work in priority Area Councils where biodiversity conservation concerns align with climate change adaptation concerns. Guiding this process will be addressing challenges in sites identified in both the NBSAP and *Ecosystem profile for the East Melanesian Islands Hotspots* which was supported by the Critical Ecosystem Partnership Fund (CEPF). This document include Vanuatu identifies sites of high levels of plant and animal endemism and accelerating levels of habitat loss, caused chiefly by widespread logging and mining, expansion of subsistence and plantation agriculture, population increase, and the impacts of climate change and variability.

VCAP II will focus on addressing land degradation and will seek to ensure these upland areas are managed in a manner to enhance and sustain ecosystem resilience so that the nature ecosystems continue to provide ecosystem benefits. The protection of upland ecosystems within Community Conservation Areas will provide positive outcomes for biodiversity and will enable the protection of water sources, prevention of erosion and enhance overall resilience to climate change. Where alien invasive species are contributing to species loss at the local level appropriate measures will be taken to support implementation of alien and invasive species national management plans.

Upland area plans will outline a comprehensive extension and outreach program for farmers (including men, women and youth) on land management and climate resilient agricultural practices. Additionally, climate resistance crops and erosion control plants (e.g. vetiver grass and bamboo) will be disseminated to all communities. The planning of erosion control species will form part of the "softer measures" for addressing maintenance of infrastructure. These plans will outline measures for managing water resources and creating terrestrial conservation areas in sites where this is required.

Enhancing the management of land and surface water will also aid in community farming and coastal fishing. Decreasing sediment generation and erosion, securing crops and water management, and conserving terrestrial resources will create more climate change resilient coastal communities. Lessons learned from the management of these areas' activities/areas will be highly relevant to other communities in Vanuatu and can serve as a guide for replication in future projects

Associated with all infrastructure improvements and development will be 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. Pandanas and vitiver grass have a good effect in this regard. In addition, the lessons of V-CAP II will be incorporated into the design of the full project. Their primary function of stabilizing the soil results in erosion reduction and protection of adjacent roads and river crossings provided these are planted strategically. Re-vegetation also provides additional co-benefits in terms of enhanced food security and income earning opportunities for coastal communities.

V-CAP II will focus in Output 1.2.2 on maintaining and enhancing coastal waters and associated resources of Vanuatu as a vital resource for the country; These resources are critical to the economy, to food security and livelihoods for much of the nation particularly in rural areas. Approximately 70% of the population of Vanuatu is located within the coastal zone. In addition, these areas contain a wealth of important biodiversity. Yet, these resources are being rapidly degraded by a variety of different causes.

V-CAP II will continue to develop Community Integrated Coastal Zone Management Plans (CICZM Plans) at village and Area Council levels to enhance resilience of coastal eco-systems to climate change. The Plan will focus on building resilience to climate change through a number of measures. These include eco-system-based management of fisheries

resources through; enhancement management of sacred sites and traditional tabu areas; establishment of additional tabu areas, CCAs and conservation networks, and through additional fisheries management tools including gear restrictions.

A comprehensive baseline survey will inform these Plans, which will focus on establishing baselines for marine ecosystem health, identifying breeding and recruitment areas and opportunities which will contribute to longer-term zoning for effective management of the sites. Baseline surveys must be adapted (site-specifics) as all target sites will not share the same issues/priorities. Communities will be engaged in the development of plans and monitoring. These plans will also outline a comprehensive education and outreach program for fishers (men, women and youth) on marine and coastal zone management. This outreach plan will link with and build upon the on-going work of the Turtle Monitoring Network. Trough V-CAPP II and links to other projects, e.g. the GEF funded Expanding Conservation Areas Reach and Effectiveness (ECARE) in Vanuatu. V-CAP II will continue to link with the *Locally Managed Marine Area Network, a* network on communities practicing management of traditional "tabu" areas throughout the Pacific. This network has substantial experience in the development of community engagement in coastal zone management and the establishment of local fishery regimes. Interactions with this network will enhance capacity building and sharing between community approach in Vanuatu and other Pacific Island Countries. Additionally, V-CAP will maintain and support the linkages created with IRD – a French Government research agency that is providing vital support to the Department of Fisheries in the development of science to support the on-going efforts for fisheries management.

Enhancing eco-system resilience to climate change in the coastal areas will have additional benefits including an increase in the coverage of marine conservation areas in Vanuatu. The benefits associated with this include increases biodiversity, eco-system resilience and increased fish populations through active breeding grounds, nurseries, and feeding areas. As marine conservation areas grow, the fish population in protected areas will spill over into the non-protected areas, thus improving the abundance of fish available for harvest. V-CAP II will also further develop synergies, or networks, with the existing marine resource management projects within Vanuatu. These projects currently operate through the Ministry of Fisheries and Wan Smol Bag. Lessons learned from the management of these areas will be applicable to other LMMAs in Vanuatu. Furthermore, the lessons learned from creating a chain of linked LMMAs and Tabu Areas within a single area will serve as guide for future projects in Vanuatu in their efforts to enhance resilience to climate change.

Finally, 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.

V-CAP II will focus in Output 1.2.3 on the climate proofing of "public conveyance infrastructure". This not only to roads and vehicular transport, but also refers to pedestrian walking paths that connect to the main roads and also to pedestrian river crossings that occur on the main roads. Public conveyance infrastructure is the infrastructure that provide linkages between communities and services and markets, e.g. heath centres, schools and markets. Climate change will present a number of challenges to this public conveyance infrastructure. Unsealed walking paths and trails are a source of erosion which will become worse under droughts, additional rains and changes in seasonality. There may be increased landslides. Water flows in river crossings will become more unpredictable.

The activities in this component make use of both soft and hard interventions and are designed to increase resilience (i.e. reducing vulnerability) of public conveyance infrastructure to the impacts of climate change through strengthening natural, built, social, and governance systems. All of these elements are essential in the long-term maintenance of public conveyance infrastructure.

Hard engineering options on roads and walking paths will be used to correct drainage systems, stabilize hard infrastructure against erosion and collapsing of side-banks, bridge rehabilitation (including river protection to stop erosion and undermining), and pedestrian river crossings, foot bridges and major pathways. These hard engineering options will rehabilitate and strengthen existing infrastructure systems that were in the past constructed by communities, government or a partnership between both.

Softer engineering options will be identified together with local communities and may include slope stabilization of roads and walkways through planting with vetiver grass and bamboo, and the stabilization of the coast through the planting of mangroves, coastal vegetation and related species.

V-CAP II interventions will modify vulnerability in these areas by minimizing exposure to water related damage and will enable communities to continue to use conveyance infrastructure for increased periods of time (whether road or pedestrian crossings) even in times of extraordinary rain and flooding (within safety considerations).

V-CAP II will also build upon the Australian funded Vanuatu Transport Sector Strengthening Programme (VTSSP) through a range of integrated activities including erosion control and supporting climate proofing of investments by providing incremental funding for construction that integrates future climate change projections (e.g. providing larger drains for extreme rainfall events, and ensuring river banks are stabilized).

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 capacity for systematic analysis and prediction of climate-related events is improving. In the past cyclones and other weather have left the country unprepared resulting in losses and the use of scarce government funds for rehabilitation. The total losses from TC Pam were estimated to be 64.1% of Vanuatu's gross domestic product (US$449.4 million). Improving forecasting and warning systems will make a valuable contribution to Vanuatu’s economy. 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.

It is likely the increasing strength of cyclones will have an increasing impact on economic activity and human security in Vanuatu. In the next 50 years, tropical cyclones and earthquakes are expected to incur, on average, US$ 48 million per year in Vanuatu7. This makes the integration of disaster risk management and climate change adaptation a national priority. There has been good progress towards a systematic, nation-wide early warning system in Vanuatu utilising mobile communications.

However, it is vital that high quality forecasting is undertaken for all weather events in Vanuatu. Once this information is gathered high quality information is presented to all people of Vanuatu. This requires a coherent system for risk assessments, communication, and a monitoring and warning service operating 24 hours a day with reliable communication channels for early warning, and response capacity. These services and functions are important for human security as well as economic development of both land- and marine-based activities.

VMGD installed 7 Automated Weather Stations (AWS) as part of V-CAP I. Capacity will be strengthened as part of VCAP II in the forecasting and communication systems using the information generated by the AWS. Training of all forecasting staff will be undertaken. The forecasting of cyclone, coastal flooding and severe weather will be undertaken for all people of Vanuatu. Efforts will ensure information is able to reach as close as possible to 100% of the population.

VCAP II will support VMGD in a range of activities to enhance their capacity. This will include obtaining a an appropriate "one stop weather forecast and warning system" that will pull together all weather data such as radar, AWS, manual observation data, community rainfall network, buoys, tide gauges, satellite data and etc. From these data inputs, the system can produce forecasts, warnings and technical reports that can be access remotely by all communities via different media sources, aviation industries, Education sectors, Insurances companies, transportation sectors, public, government and international communities. In addition, the current weather dissemination platform that was made during VCAP I will be enhanced and upgraded to improve forecasting. This quality information will be further supported by obtaining a satellite "Cloud Data Set" from an appropriate source as co-financing for VCAP II. The Himawari-8/9 satellite's provision of image data is an essential meteorological service. To distribute the enormous volumes of Himawari-8/9 imagery, JMA established an Internet cloud service called HimawariCloud for National Meteorological and Hydrological Services (NMHSs) in the East Asia/Western Pacific regions and elsewhere. To have access to this very high resolution and true colour satellite data, the Department of Meteorology will require very high capacity server and a very a good internet band width. This will also contribute to the production of high-quality TV weather and climate change information for dissemination throughout the country. This will require appropriate equipment and software including professional video recording equipment's and a dedicated space with proper services. Finally, these activities will rely upon a continuation of the capacity building activities for the technical staff of the VMDG through exchange of meteorologists to master certain skills to improve EWS within VMGD

Component 3: Climate change governance: The government of Vanuatu is committed to mainstreaming climate change into national planning and development plans. A current example of this approach is the NSDS and the Vanuatu Climate Change Finance Review (2018) which is seeking more effective coordination and delivery of the policy to support integration of climate change adaptation into the various sectors.

The Vanuatu Climate Change Finance Review (2018) notes that Vanuatu has made significant progress over the last few years in the development and endorsement of climate change specific policies, strategies and planning tools. Integrating these into sectoral policies is critical. Specifically, it called for the development of an M&E framework for the

CCDRR Policy, which links to the NSDP M&E Framework, to assist to track and report on progress against the CCDRR Policy implementation. It notes that future updates to and development of new policies should include actions, targets, indicators and costings as standardised components.

The development of the NSDP and the inclusion of this specific climate change policy goal highlight the need to integrate climate change as a cross-cutting development issue at the highest national level. This now provides an overarching framework for climate change and disaster resilience to be integrated across all sectors going forward.

The development of the Vanuatu Climate Change and Disaster Risk Reduction (CCDRR) Policy was is Vanuatu's first national climate change policy and launched in 2016. In line with the NSDP, the CCDRR Policy stipulates the vision 'Vanuatu is a resilient community, environment and economy'.

Vanuatu's National Action Plan on Disaster Risk Reduction and Disaster Management 2006-2016 is currently being reviewed and updated. This will align with the recent review of the National Disaster legislation that aims to provide a strengthened legislative environment for disaster management in light of lessons learned from recent Tropical Cyclone Pam.

Finally, the Vanuatu National Environment Policy and Implementation Plan 2016-2030 within the Environmental Management and Conservation (Amendment) Act No. 28, which specifies the consideration of climate change adaptation and mitigation issues within the scope of all environmental management activities. As such, this policy includes climate change as a key policy objective area and stipulates supporting the implementation of the CCDRR Policy and mainstreaming CCDRR into policies, strategies, budgets and planning at all levels. Notable, this environment policy includes an implementation plan with targets, proposed activities, indicators and key partners. V-CAP II will contribute resources to mobilise this plan.

Vanuatu has made significant progress since 2014 in bringing climate change to the fore as a cross-cutting issue. The CCDRR notes the mainstreaming of CCDRR has been completed in National Forest Policy, Agriculture Sector Policy, and the National Curriculum Statement. However, there remains much more to complete. The Department of Climate Change is contributing to the cross sectoral implementation.

There is a need to continue to ensure policy frameworks support formation of regulations for protection of key habitats to support ecosystem-based adaption including mangroves, coral reefs and upland forests.

Further integration of CCDRR into sectoral policies is hindered by lack of expertise, competing demands on staff time, inadequate equipment, and lack of incentives. Lack of coordination between different policy sectors as well as between national, provincial and local governments also exacerbates difficulties in mainstreaming climate change.

Policy development will focus on the delivery of the NSDS and the CCDRR Policy. It will be integrated into national planning efforts and will not duplicate existing government and non-government efforts.

Capacity building activities will target key staff of national and provincial agencies and the community leaders and residents where the project will implement 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, DCC, 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 ecosystem-based adaptation, formulation and 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 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: Increasing understanding of climate change, adaptation approaches and disaster risk reduction is vital for the people and economy of Vanuatu. Tropical Cyclone Pam and the World Bank's Post Disaster Needs Assessment, endorsed by the Vanuatu Government, estimated total damage and loss from Tropical Cyclone Pam at around $600 million, or 64 per cent of GDP. The need for increased awareness if obvious.

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. Lack of knowledge and training constitutes a major barrier to climate resilience. 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).

V-CAP- II will build upon the successful outcomes V-CAP-I. The project will document lessons learnt from V-CAP I and will ensure emerging lessons from V-CAP II are shared. The unique position of V-CAP II working with all of the provinces will provide an opportunity to comprehensive delivery of the adaptation approaches and disaster risk reduction at the provincial and Local Area Council and community levels. Suitable information kits about CCA and the project will be prepared. Various environmental media will be utilised with a focus on video, digital mechanisms, radio and broadcast. A project website linked to the NAB 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.

1A-4) Alignment with GEF focal area and/or Impact Program strategies;

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

The project is aligned (refer to Table A in Part I) with:

- BD-1-1 Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors
- BD-1-5 Mainstream biodiversity across sectors as well as landscapes and seascapes through Inclusive conservation
- LD-1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)
- CCA-1 Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level

1A-5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;

Vanuatu is classified as a lesser developed country, thus is in need of critical support to assist communities adapt to climate change. The baseline will be existing government and community initiatives to undertake conservation, land management which will contribute to enhancing resilience to address climate change adaptation. It is clear from VCAP I that communities are already experiencing what could be considered as climate related impacts that these were likely to become worse under the CC scenarios. Given the limited level of government resources available for building resilience to CC the specific activities identified VCAP II support are clearly focused on directly providing adaption solutions for communities at the village level. The LDCF and GEFTF support is considered as crucial to securing livelihood assets to build resilience to CC and to contribute to biodiversity conservation.

VCAP II will also build upon and support government efforts for road and other infrastructure construction and maintenance through a range of integrated activities including erosion control and supporting climate proofing of investments by providing incremental funding for construction that integrates future climate change projections (e.g. providing larger drains for extreme rainfall events, and ensuring river banks are stabilized). In terms of delivery of infrastructure, V-CAP will ensure road maintenance is able to address severe rainfall events, erosion and poor water management which are more damaging to roads. Thus, VCAP II will work with those agents delivering “hard’ solutions such as PWD and provide incremental support through the provision of softer “natural” infrastructure solutions to maintain the roads.

1A-6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and

Globally there exists an urgent requirement to develop more coordinated and integrated approaches to addressing climate change and biodiversity conservation in Vanuatu. Vanuatu comprises over 80 islands, of which 68 are inhabited, and has a population of around 266,555 people (2016 Government of Vanuatu). These climate risks to the people of Vanuatu are immense. According to the Commonwealth Vulnerability Index, Vanuatu is one of the world’s most vulnerable country due to its high exposure to natural disasters, scattered island geography, narrow economic base, rudimentary communication and transportation networks, and limited capacity to cope with disasters including climate change.

Global environmental benefits will accrue through this project via both the on-the-ground results in relation to climate change adaptation and addressing the driver behind the loss of biodiversity. Significantly, VCAP II will strengthen the ability of an integrated approach to address climate change adaptation and biodiversity conservation. This will lead to mainstreaming of these approaches in national and local development planning. Such approaches are necessary to ensure appropriate synergies among the work of various sector agencies, between the national government, Area Councils and communities. These investments combine with those of development partners and donors will build island sustainability and resilience.

1A-7) innovation, sustainability and potential for scaling up.

A key underlying principle in the delivery of VCAP II will be to build on existing coping strategies of rural communities who have a long history of responding to geological and climate variability and change, with varying success. These short-term coping strategies form the basis of successful long-term adaptation strategies. However, care needs to be taken as some of these traditional coping strategies could prove to be unsustainable over time as climate change progresses leading to a greater risk of maladaptation.

Innovative approaches and new technologies, along with careful monitoring of the effectiveness of strategies in view of changing circumstances is needed to ensure these adaptation strategies remain appropriate. Rural communities are therefore the key actors for implementing adaptation strategies and hard-won lessons can be learned, communicated and fed into adaptation decision making at higher levels to benefit the nation.

In addition, VCAP II will build upon the donor funded projects being implemented in rural communities aimed at addressing the effects of climate change which are delivered by both government, non-state agencies and other development partners. Frequently these initiatives take the form of “pilots” or “demonstration projects” which are useful in addressing climate change related challenges at community level. As such, VCAP II provides a pivotal opportunity to upscale successful pilots for deployment in targeted communities.

Similarly, in VCAP II will build upon DRR planning processes that have been piloted and will broaden these initiates to ensure the communities are aware of disaster plans and that these plans are regularly reviewed, updated and able to be implemented as needed in response to a situation requiring its implementation.

VCAP II will develop and deliver a targeted and useful communication program to ensure the engagement of the wider community and additional partners. Innovative approaches will be needed to deliver this program. It is important that this communication program is innovative and delivers materials that are socially appropriate for Vanuatu. The long-term nature of the challenges of climate change need to be emphasized and empowering communities in partnership with governments and other development partners will be a key element in this process.

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[1] 1 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.

[2] Risk Governance Assessment Report, of the Project titled “Strengthening Climate and Disaster Risk Governance in Vanuatu”, UNDP, Ministry of Climate Change, Draft Report November 2013.

[3] VNSO – International arrival statistics December 2018

[4] Risk Pacific Catastrophe Risk Assessment and Financing Initiative

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

The project will take place in all six-provinces of Vanuatu.

The specifc sites of interevention will be identified through a comprehensive selection process lead by the Government of Vanautu in the project preparation phase.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities

If none of the above,please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

The Mnistry of Climate Change has been responsible for coordintion of the inputs into the development of VCAP II. The National Advisory Board (NAB) takes the lead role in the coordination of climate change adaptation programmes in country. With the current institutional structure in place, the present members who form the NAB have provided initial technical guidance in the development of this VCAP II.

In addition, the NAB provides a mechanism for cooperation with civil society organisations through cooperation with Vanuatu Climate Adaptation network (VCAN). VCAN has a range of partners including Oxfam, CARE International in Vanuatu, Save the Children, Vanuatu Red Cross Society, Vanuatu Rural Development Training Centres Association, SPC/GIZ, Vanuatu Humanitarian Team (VHT). All of these agencies cooperated in various ways with VCAP I. It is proposed that these agencies will be further consulted in the project preparation phase of VCAP II. In addition, the project preparation phase of VCAP II will work together with the Vanuatu Association of NGOs (VANGO).

In addition, indigenous peoples and local communities were important stakeholders in VCAP I and were a major focus of the projects approach and delivery. This will continue in VCAP Phase II.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

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. Gender will be incorporated as an explicit variable for review in monitoring and evaluation.

Gender will be a specific focus of VCAP II. The gender inclusion plan developed as part of VCAP I will be reviewed in the project preparation period. Lessons learnt will be incorporated into the design of the full project.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women.

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

There will be a role for the engagement of the private sector in VCAP II. This will build upon the engagement of "island contractors" in VCAP I. these "island contractors" are local companies established to support efforts towards construction and maintenance of roads and infrastructure towards climate proofing.

5. Risks

Indicate risks, including climate change, potential social and environmental 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 (table format acceptable)

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:

Risk	Rating	Mitigation
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 build upon coordination mechanism amongst partners through the NAB providing mechanisms for seeking their inputs at all levels (project steering committee, project site committees, etc.). A Project Implementation Unit will be established to oversee the whole operations & management of the project. The project will be coordinated through the NAB which has an appropriate mandate for coordination and resource deployment.
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. Detailed baseline studies prior to engagement of communities will be undertaken to understand the community well and in doing so tailor a workable approach to their active 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. This will be addressed in the project preparation phase.
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 adaptation 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 will encourage the cooperation of the various ministries to buy in where necessary to have high-level support.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The primary coordination mechanism has been established through the National Advisory Board for climate change (NAB). This has strengthened the governance structure over CC adaptation, DRM and DRR initiatives in the country. The NAB is chaired by the Directors General of the Ministry of Climate Change & the Prime Minister's Office. Members are senior-level representatives from sectoral government agencies, CSO representatives, and technical advisors.

The Ministry of Climate Change Adaptation (MCCA), Meteorology & Geo-Hazards, Energy, Environment and National Disaster Management Office. This Ministry draws together key agencies working directly on environment, climate change adaptation and mitigation. The Director of Department of Environment is the GEF Focal Point and is also on the NAB. This will facilitate coordination with other GEF financed projects and other initiatives in Vanuatu.

The secretariat of NAB is based in the Department of Climate Change based at the Ministry. Vanuatu's National Advisory Board on Climate Change & Disaster Risk Reduction.

As indicated above, there is a high degree of commitment across Vanuatu's 12 ministries to integrate climate change issues into national planning documents and sector plans.

The Ministry of Climate Change Adaptation, Meteorology & Geo-Hazards, Energy, Environment and National Disaster Management Office will be responsible for project implementation. The specific roles of each agency will be refined during the project preparation phase.

The specific approach to project monitoring and evaluation will draw upon the lessons learnt from VCAP I. The results of the terminal evaluation will provide a number of recommendations for VCAP II. These will form the basis of the specific approach. One approach incorporated into this PIF was the allocation of additional resources to communication of community approaches to climate change adaptation and awareness raising.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

Plan	Consistency

“Vanuatu 2030” is the National Sustainable Development Plan (NSDP) for the period 2016 to 2030.	This plan seeks to further extend the linkages between resources, policy and planning to the people. Environment is one of the three pillars as part of the NSDP. These environment pillar has five goals and 29 policy objectives with 62 indicators and 64 targets. V-CAP II is aligned to address the Environment Goals 2,4 and 5 as outlined below. Environment goal 3 – Climate and disaster resilience - A strong and resilient nation in the face of climate change and disaster risks posed by natural and man-made hazards ENV 3.1 Institutionalise climate change and disaster risk governance, and build institutional capacity and awareness ENV 3.2 Improve monitoring and early warning systems ENV 3.3 Strengthen post-disaster systems in planning, preparedness, response and recovery ENV 3.4 Promote and ensure strengthened resilience and adaptive capacity to climate related, natural and man-made hazards ENV 3.5 Access available financing for climate change adaptation and disaster risk management. In addition, Environment Goal 4 on Natural Resource Management and Environment will contribute to ENC 4.1 Strengthen local authorities and municipal planning authorities to enact and enforce land use planning laws and regulations ENV 4.2 Protect vulnerable forests, watersheds, catchments and freshwater resources, including community water sources ENV 4.3 Prevent land degradation and downstream environmental damage from mineral resource extraction ENV 4.4 Promote the sustainable development of the fisheries sector that values the protection and conservation of marine and freshwater resources ENV 4.5 Reduce and prevent the degradation and erosion of foreshore and coastal areas ENV 4.6 Reduce deforestation and ensure rehabilitation and reforestation is commonplace ENV 4.7 Build capacity and support local communities to manage natural resources. In addition, Goal 5 on Ecosystems and biodiversity will be implemented ENV 5.1 Protect biodiversity and ecosystems and their significant role in our culture, society and environment ENV 5.2 Create and manage conservation and protected areas ENV 5.3 Support local conservation and protection of endangered, threatened or endemic species and ecosystems including though traditional knowledge and practices ENV 5.4 Protect our borders and environment through effective customs and biosecurity services ENV 5.5 Increase awareness on biodiversity conservation and environmental protection issues across government and publicly ENV 5.6 Enhance environmental monitoring, evaluation and research with relevant, open and transparent data sharing among relevant agencies

National Bio Strategy Action Plan (NBSAP) - 2018-2030	This VCAP II will support the delivery of the NBSAP, in particular contribute to: · Strategic Area 1: Conservation Area Mangement (terrestrial and marine)– increase the area of representative coverage of Protected Areas (PAs) in Vanuatu in the form of community conservation areas (CCAs); · Strategic Area 2: Forest and inland water ecosystem conservation and management · Strategic Area 3: Coastal and marine ecosystems conservation and management (CME) · Strategic Area 5: Management of invasive alien species (MIAS) ·
National Adaptation Programme of Action (NAPA).	The project will explicitly address four of eleven priorities identified in the NAPA including: 1) community-based marine resource management, 2) integrated coastal zone management, 3) Land use planning and management; and 4) mainstreaming climate change into policy and national planning processes. The NAPA places particular emphasis on the need for community-based resource management, embracing both traditional and modern practices and enhancing the resilience of vulnerable communities. To address these priorities, the project will focus on adaptation options outlined in the NAPA including: i) development of provincial / local adaptation and ICM plans, ii) climate proofing of infrastructure design and development planning, iii) development of an efficient early warning system, iv) Landslides associated with prolonged and intense rainfall, iv) awareness raising and capacity building, and v) coastal re-vegetation and rehabilitation.
National Action Program (NAP) to address land degradation and mitigate the effects of drought	The Republic of Vanuatu became a Party to the UNCCD in 1999. The NAP reflects the Government of Vanuatu's commitment to addressing land degradation and drought. VCAP II will explicitly address the following priority actions from the NAP. These include: 2.2) Demonstration activities in each province demonstrating good land-use practices; 2.3) education and awareness; 3.1) Access needs and develop programs for strengthening capacity at the community level in addressing vulnerability to negative effects of droughts and climate variability in their community; 3.2) Develop programs to strengthen village and community leadership and networks in drought and climate variability.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The primary knowledge management mechanism will be through the coordination mechanism of the National Advisory Board for climate change (NAB). This will be achieved through the following approaches:

- Utilising the knowledge management and coordination provided by the NAB;
- Mainstreaming project approaches into the approaches of the line implementing partners and agencies; and
- Publishing key knowledge generated and findings NAB knowledge sharing portal - https://www.nab.vu

The specific approach to knowledge management in VCAP II will draw upon the lessons learnt from VCAP I. The results of the terminal evaluation will provide a number of recommendations for VCAP II. These will form the basis of the specific knowledge management approach. One approach incorporated into this PIF is to build upon sharing the approaches and lessons learnt from all the projects being implemented in cooperation with the NAB. This will build upon and enhance the knowledge management approaches of key ministries and line agencies.

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

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

Name	Position	Ministry	Date
Donna Kalfatak	Director, Department of Environment	Ministry of Climate Change Geo-Hazard, Meteorology, Energy and Environment	9/26/2019

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place