



FAO/GLOBAL ENVIRONMENT FACILITY PROJECT DOCUMENT



Project Title:	Integrated Sustainable Land and Coastal Management																						
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Expected EOD (Starting Date):	1 November 2016																						
Expected NTE (End Date):	31 October 2021																						
Contribution to FAO's Strategic Framework: (Indicate as appropriate)	<i>a. Strategic objective/Organizational Result:</i> SO2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. Organizational Outcomes 1 and 2, <i>b. Regional Result/Priority Areas:</i> Fostering agricultural production and rural development Enhancing equitable, productive and sustainable natural resource management and utilization <i>c. Country Programming Framework Outcome:</i>																						
Contribution to GEF TF Focal Area Strategic Objectives and Programs:	<i>Biodiversity (BD-1)</i> – Improve sustainability of protected area systems <i>Land Degradation (LD-3)</i> - Integrated Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape <i>Climate Change Mitigation (CCM-5)</i> – Promote conservation and enhancement of carbon stocks through sustainable management of land use, land use change, and forestry <i>International Waters (IW-3)</i> - <i>Sustainable Forest Management (SFM-1)</i> - Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services <i>Sustainable Forest Management (SFM-2)</i> -																						
Environmental and Social Risk Classification	low risk <input type="checkbox"/> moderate risk <input checked="" type="checkbox"/> high risk <input type="checkbox"/>																						
Gender Marker	G0 <input type="checkbox"/> G1 <input checked="" type="checkbox"/> G2a <input type="checkbox"/> G2b <input type="checkbox"/>																						
Financing Plan: GEF/LDCF/SCCF allocation: USD 4 605 680 Co-financing: <table style="width: 100%; margin-left: 20px;"> <tr><td>FAO (grant)</td><td style="text-align: right;">1 175 000</td></tr> <tr><td>FAO (in-kind)</td><td style="text-align: right;">600 000</td></tr> <tr><td>ACIAR¹ (grant)</td><td style="text-align: right;">571 516</td></tr> <tr><td>VANGO² (grant)</td><td style="text-align: right;">650 000</td></tr> <tr><td>VANGO (i-kind)</td><td style="text-align: right;">5 000</td></tr> <tr><td>Live & Learn Vanuatu (in-kind)</td><td style="text-align: right;">20 000</td></tr> <tr><td>The Pacific Community (SPC) (grant)</td><td style="text-align: right;">1 354 597</td></tr> <tr><td>Vanuatu Government (grant)</td><td style="text-align: right;">10 000 000</td></tr> <tr><td>Vanuatu Government (in-kind)</td><td style="text-align: right;">500 000</td></tr> <tr><td>New York Botanical Garden (grant)</td><td style="text-align: right;">414 445</td></tr> </table>				FAO (grant)	1 175 000	FAO (in-kind)	600 000	ACIAR ¹ (grant)	571 516	VANGO ² (grant)	650 000	VANGO (i-kind)	5 000	Live & Learn Vanuatu (in-kind)	20 000	The Pacific Community (SPC) (grant)	1 354 597	Vanuatu Government (grant)	10 000 000	Vanuatu Government (in-kind)	500 000	New York Botanical Garden (grant)	414 445
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¹ Australian Centre for International Agricultural Research

² Vanuatu Association of Non-Governmental Organisations.

EXECUTIVE SUMMARY

This project forms part of the regional ridge to reef (R2R) programme “Pacific Islands Ridge-to-Reef National Priorities: Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods”. It will promote the integrated management of watersheds and associated landscapes in four main project localities in such a way as to deliver multifocal (BD-1, LD-3, CCM-5, IW-3, SFM-1 & SFM-2) benefits. Its three components will focus on

- 1) Improving the enabling environment for integrated sustainable land and coastal management, by mainstreaming integrated R2R considerations mainstreamed into sector development policies, strengthening environmental planning and decision-making processes so that they take integrated R2R considerations into account, and increasing the availability of financial resources from sources such as the tourism sector to environmental conservation and PA management;
- 2) Field level support to integrated ridge to reef management in priority island localities; through the facilitation of multi-stakeholder participatory planning and governance, the promotion of production systems compatible with the maintenance of ecosystem goods and services, the direct restoration of degraded areas, the strengthening and expansion of community-based PAs and associated buffer zones and corridors, and the strengthening of local finance mechanisms; and
- 3) Knowledge management, including the systematization and dissemination of best practices and lessons learned, support to decision-making and planning guided by information on trends in ecosystem conditions, and effective M&E in support of adaptive project management.

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GLOSSARY OF ACRONYMS

ADB	Asian Development Bank
ARDS	Agriculture Rural Development Strategy
AusAid	Australian Aid
AWP/B	Annual Work Plan and Budget
APPR	Annual Project Progress Report
BD	Biodiversity
BH	Budget Holder
CBD	Convention on Biodiversity
CBO	Community Based Organization
CC	Climate Change
CCA	Community Conservation Area
CEO	Chief Executing Officer (GEF)
CSO	Civil Society Organization
CTA	Chief Technical Advisor
ELMA	Efate Land Management Area
EP	Executing Partner
EU	European Union
EVCC	Efate Vaturisu Council of Chiefs
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
FLEGT	Forest Law Enforcement, Governance and Trade
FPMIS	Field Project Management Information System
FSC	Forest Stewardship Council
FSPV	Foundation for the Peoples of the South Pacific Vanuatu
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GEFTT	GEF Tracking Tools
GEO	Global Environmental Objective
GIS	Geographical Information System
GIZ	German Agency for International Development
ISLCM	Integrated Sustainable Land and Coastal Management
INRM	Integrated Natural Resources Management
IUCN	International Union for the Conservation of Nature and Natural Resources
KBA	Key Biodiversity Area
LCIP	Landholders Conservation Initiatives Project
LD	Land Degradation
LTO	Lead Technical Officer
LULUCF	Land Use, Land Use Change and Forestry
MAQFF	Ministry of Agriculture, Quarantine, Forestry and Fisheries
MARSH	Mangrove Rehabilitation for Sustainably managed Healthy Forests
M&E	Monitoring and Evaluation
MESCAL	Mangrove Ecosystems for Climate Change Adaptation and Livelihoods
METT	Management Effectiveness Tracking Tools

MFA	Multi Focal Area
MLNR	Ministry of Lands and Natural Resources
MRV	Monitoring, Reporting and Verification
MTTCI	Ministry of Trade, Tourism, Commerce and Industry
NAMA	Nationally Appropriate Programme of Action
NAP	National Action Plan
NAPA	National Adaptation Programme of Action
NBSAP	National Biodiversity Strategy and Action Plan
NDS	National Development Strategy
NGO	Non Governmental Organization
NPC	National Project Coordinator
NSC	National Steering Committee
NTA	National Technical Advisor
NTFP	Non Timber Forest Product
NZAid	New Zealand Aid
OFP	Operational Focal Point for GEF
PAs	Protected Areas
PDO	Project Development Objective
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review (GEF)
PPG	Project Preparation Grant (GEF)
PPP	Private Public Partnership
PPR	Project Progress Report (FAO)
PRODOC	Project Document
PSC	Project Steering Committee
PTF	Project Task Force (FAO)
PY	Project Year
QPIR	Quarterly Project Implementation Report
REDD	Reduction of Emissions from Deforestation and Forest Degradation
R2R	Ridge to Reef Program (GEF)
SFM	Sustainable Forest Management
SLM	Sustainable Land Management
SOPAC	South Pacific Applied Geo-science Commission
SAP	FAO Sub Regional Office for the Pacific Islands
SME	Small and Medium Enterprises
SPC	The Pacific Community (formerly South Pacific Commission)
SPREP	Secretariat for Pacific Regional Environment Programme
STAP	Scientific and Technical Advisory Panel
TABU	Traditional Land and Resources Management System
TCI	Investment Centre Division (FAO)
TF	Trust Fund
LTF	Local Trust Fund
TNC	The Nature Conservancy
TOR	Terms of Reference
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

UNCCD	United Nations Convention to Combat Desertification
USD	United States Dollar
VANGO	Vanuatu Association of Non-Governmental Organisations
WWF	World Wildlife Fund

SECTION 1 – PROJECT RATIONALE

1.1 OVERVIEW OF THE PROJECT CONTEXT

1.1.1 Background

1.1.2 General geographical context

1. Vanuatu is one of the five Melanesian countries along with Fiji, New Caledonia, Papua New Guinea and Solomon Islands, located in the South Pacific Ocean; it became independent from joint British and French rule in 1980. The country is an archipelago of more than 80 islands, stretching for around 1,300km from north to south, with steep hills and peaks cloaked in rainforests, and a total land area of 12,189km². The islands are largely composed of volcanic rocks but terraces of coral reef limestone are also present on many islands. They were created as a result of sea level changes combined with subsequent uplifting.

2. Vanuatu is made of three areas of distinctive geological style: the Western Belt, the central volcanic chain and the Eastern Ridge. The Western Belt and the Eastern Ridge are the oldest. The central volcanic chain is formed during the Pliocene period. The central volcanic chain is made up of part of the Santa Cruz Islands of the Solomon Islands, Banks group, Ambae, Ambrym and the Shepherd group in the center, and Efate, Erromango, Tanna and Aneityum in the southern tail. These are the volcanic islands.

1.1.3 Population and development levels

3. According to UN Human Development Report (2103) out of 187 countries, Vanuatu occupies the position of 124 in the rankings of Human Development Index. Much of its growing population lives below the poverty line of USD 1.25 per day, with an average life expectancy at 71.3 years. Per capita GDP is USD 2,856.

4. A 2006 comparative assessment of poverty for 13 Pacific Island Countries placed Vanuatu at 5.6% basic needs poverty line making it the lowest in the region³. In 2010, the MDG progress report for Vanuatu identified that 4% of the population earned only \$1.00 per day while 16% of the population are living below the national poverty line⁴. In 2006, 5.4% of children were found to be living below the \$1.25 poverty line.

5. Historically, the country's demographic conditions have been strongly determined by the effects of European contact: while population levels have bounced back from the effects of the epidemics that swept many of the islands following contact, killing up to 95% of the population on some⁵, the geographical distribution of the population today still reflects in many cases the influence of missionaries in collecting groups of people from their lands in the interior of the islands and concentrating them in coastal villages, and the attraction of people to colonial administrative centres. The main urban centre, the capital Port Vila, continues to exert a strong attractive effect on people from other islands.

6. The total population of the country in 2009 was 234,023, of which 75% live in rural areas. The annual population growth rate is 2.3%: the population grew by 31% (44,259

³ 2010 Pacific Regional MDGs Tracking Report

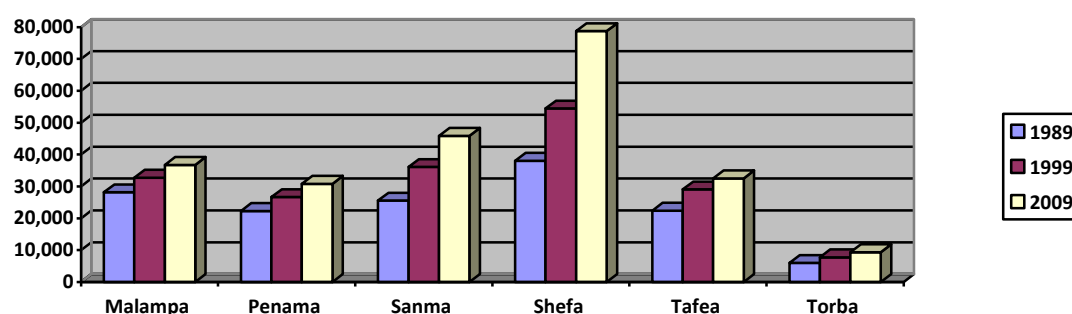
⁴ Millennium Development Goals, Vanuatu Report

⁵ Speiser (1923)

people) between 1989 and 1999, and by 25% (47,345 people) between 1999 and 2009. 41 islands showed population increases between 1999 and 2009, and 22 showed decreases: there is a trend towards greater rates of growth in the already more populous islands, where reproductive growth is compounded by migration from smaller islands (the total population in the 16 islands with more than 1,000 habitants increased by 27% between 1999 and 2009, while that in the remaining 49 less populous islands grew by only 5.2%).

Province	Census data			1999-2009 change	
	1989	1999	2009	Increase	%
Malampa	28,174	32,705	36,722	4,017	12.3
Penama (includes Pentecost)	22,281	26,646	30,819	4,173	15.7
Sanma	25,542	36,084	45,860	9,776	27.1
Shefa (includes Efate)	38,023	54,439	78,723	24,284	44.6
Tafea (includes Tanna and Aneityum)	22,414	29,047	32,540	3,493	12.0
Torba	5,985	7,757	9,359	1,602	20.7
Total	142,419	186,678	234,023	47,345	25.4

Figure 1. Population trends by province, 1989-2009



1.1.4 Climate

7. The climate has two main seasons: the cool trade wind season between May and October, and the warmer hurricane season between November and April when the sun is more or less above the archipelago. During the trade wind season the northern, leeward side of islands experience a dry period but during the hurricane season levels of precipitation is more erratic. On average up to six tropical cyclones of hurricane strength can be expected during this period.

1.1.5 Biodiversity

Regional biodiversity context

8. Vanuatu forms part of the East Melanesian Islands Conservation Hotspot (CEPF, 2012): this lies northeast and east of New Guinea and also includes the Bismarck and Admiralty Islands and the Solomon Islands. This region is one of the most geographically complex areas on Earth, with a diverse range of islands of varying age and development.

Figure 2. Location of Vanuatu within the East Melanesian Islands Conservation Hotspot



9. Habitats in the hotspot include coastal vegetation, mangrove forests, freshwater swamp forests, lowland rainforests, seasonally dry forests and grasslands, and montane rainforests. Most of the habitats are species poor by comparison to New Guinea, though rich when compared to Polynesia-Micronesia, with several tree species dominating (such as those in the genera *Terminalia*, *Pometia*, *Agathis* and *Metrosideros*).

10. Because most of the islands of this hotspot have never been in land contact with New Guinea, their fauna and flora are a mix of recent long-distance immigrants and indigenous lineages derived from ancient Pacific-Gondwanaland species. Thus, the hotspot contains classic examples of relatively recent adaptive radiation typical of oceanic islands, such as the white-eyes (family Zosteropidae) and monarch flycatchers (family Monarchidae), but also carries some odd colonizers from times past such as the giant prehensile-tailed skink (*Corucia zebrata*), whose closest living relatives are the blue-tongued skinks (genus *Tiliqua*) of Australia, New Guinea, and Indonesia. The East Melanesian Islands Hotspot also has affinities with Fiji (included as part of the Polynesia-Micronesia Hotspot), such as the *Platymantis* frogs, ancient “monkey-faced” fruit bats of the genus *Pteralopex*, and *Nesoclopeus* rails. Interestingly, while a number of species found in New Guinea also occur in this hotspot, certain groups that are prominent on mainland New Guinea are notably absent from the region, including birds of paradise, bowerbirds, scrub-wrens, tree kangaroos, echidnas and gliders.

11. Vanuatu’s flora is thought to be more closely allied with that of Solomon Islands (especially the northern- most regions of the country), with some elements from Fiji, and very few from Australia and New Caledonia (VEU MSP, 2003). However, there is considerable variation between different plant families. For instance, 59% of palm genera are shared with Fiji and a lower proportion affiliated with palms in Solomon Islands. Similarly the fauna demonstrates closer affinities with Solomon Islands.

Species biodiversity

12. The isolation of many of the islands and local adaptive radiation have led to very high levels of endemism, with numerous species endemic to the hotspot and many others endemic to subsets of the hotspot or even confined to single islands. Of the 1,300 plant

species recorded in Vanuatu, 10% are endemic and of the 121 bird species recorded, about 30 are endemic. There are 11 species of bats of which 3 are endemic and there are 19 native reptiles.

13. In general, Vanuatu's larger and older islands support both a greater diversity of terrestrial ecosystems, and a greater diversity of plants and animals (Taiki et al, 2002). Rapid speciation and sub-speciation are able to occur because of conditions such as the presence of bodies of water separating two islands, and rugged interiors that separate catchments and lowland habitats. Frequent disturbance due to the passage of tropical cyclones, earthquakes and volcanic activity also exerts a profound effect on the distribution and abundance of species, especially on smaller islands. There is also a 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. As a result, Vanuatu's biodiversity is of particular biological interest for its on-going processes of immigration, range extension and contraction, and sub-speciation (VEU MSP, 2002). Internally there is a biogeographic divide with islands to the north of Efate demonstrating significant differences to the islands to the south. A secondary divide has been described between the islands of the Banks and Torres groups (Tennant, W. J. 1992).

14. Endemic plant species include *Bleasdalea lutea*, *Corynocarpus similis*, *Ixora aneityensis*, *Croton insularis*, *Elaeocarpus persicaefolius*, *Dysoxylum aneityensis*, *Dysoxylum amooroides*, *Ficus subcordata*, *Ficus prolixa*, *Calophyllum neobudicum*, *Alphitonia zyzyphoides*, *Garcinia pseudoguttifera*, *Garcinia platyphylla*, *Dendrobium sp* and *Melicytus ramiflorus*.

15. Twelve bats are found in Vanuatu, of which four are fruit bats (flying foxes) and eight are insectivorous. Three of the fruit bats, namely the Vanuatu Flying-fox *Pteropus anetianus*, the Banks Flying-fox *Pteropus fundatus* and the primitive *Notopterus macdonaldi*, are endemic to the country.

16. 70 butterfly species are currently known in the country, of widespread genera and species, many of which are widely dispersed throughout the Pacific⁶. At least seven of these 70 species are national endemics, including the Vanuatu cornelian (*Deudorix mathewi* and *D. mathewinarua*); the New Hebrides Blue (*Nacaduba novaehebridensis nubilus*); Sacco's Emperor (*Polyura sacco santoensis* and *P. sacco sacco*); the Nebulous Blue (*Catopyrops nebulosa opacus* and *C. nebulosa nebulosi*); Lachlan's Blue; and Pulcherrima Blue (*Jamides pulcherrima*).

17. In Efate the bird species *Megapodius freycinet layardi* and *Erythrura cyanovirens regia* are listed as Vulnerable in the IUCN Red List, the rusty-winged starling (*Aplonis zelandicus*) is Near Threatened and its population is decreasing, and the Fijian iguana (*Brachylopus fasciatus*) is classified as Endangered. The Vanuatu flying fox *Pteropus anetianus* and *Notopterus macdonaldi* are both listed as Vulnerable.

18. The freshwater fish composition indicates twelve endemic species. *Sicyopterus aiensis* is a national endemic, found on Gaua, Santo, Pentecost, Efate, Tanna, Erromango and Aneityum, while *Akihito vanuatu* is endemic to Ambae and Pentecost. All the endemic species are within the Gobidae family and are species that prefer clean and well oxygenated,

⁶Tennent John, 2009. A Field Guide to the Butterflies of Vanuatu. Storm Entomological Publications.

moderate to fast flowing segments of rivers. The freshwater fauna depends on the health of the riparian vegetation and the forest of the water catchment areas.

***Ecosystems*⁷**

1) Mixed Lowland Rainforest

19. Up to about 600m, altitude lowland rain forest is the natural vegetation on the southeastern, windward sides of all Vanuatu islands. Important trees include *Antiaris toxicaria*, *Castanospermum australe*, *Intsia bijuga* and *Kleinhovia hospita*. Endemic species include *Alangium vitense* (Cornaceae). On old volcanic ash, rich in plant nutrients, trees can reach more than 30 m in height with large crowns. Typical sub canopy trees include *Diospyros acris*, *Garcinia pancheri* and *Syzygium* species, while endemic small trees include various *Veitchia* palms, *Calophyllum inophyllum* (Clusiaceae) and *Trilocularia pedicellata* (Balanopsidaceae).

20. These forests are best developed on the northern islands of Malekula and Espiritu Santo, and are structurally similar to forests on the Solomon Islands. However, many are in various stages of recovery following disturbance from hurricanes. Vines and epiphytes are numerous and certain areas are covered with lianas. The undergrowth includes various shrubs, and typically there is an herbaceous ground layer comprising genera such as *Geophila* and *Homalomena* and ferns like *Asplenium*, *Microsorium* and *Pteris*, but tree ferns are usually absent. Of endemic species, however, many seem to be specific to certain islands or island groups.

2) Agathis-Calophyllum Forest

21. Forest dominated by the endemic kauri *Agathis macrophylla* (Araucariaceae) and sandalwood *Calophyllum neo-ebudicum* (Clusiaceae) are confined to the southern islands of Aneityum and Erromango: scattered emergent kauri also occur in the western mountains of Espiritu Santo, but no *Calophyllum*, while *Calophyllum* does occur on Efate. *Agathis* and species of Podocarpaceae form an ancient floristic element of these forests: the fossil record of *Agathis*, for example, can be traced back to the Jurassic period and extant species often referred to as 'living fossils'.

22. Other common trees found in these forests include *Acronychia simplicifolis*, *Bleasdalea lutea*, *Canthium cynigerum*, *Celtis paniculata*, *Dacrycarpus imbricatus*, and the endemic *Dysoxylum aneityensis* (Meliaceae), *Elaeocarpus hortensis* (Elaeocarpaceae), *Ficus granatus* (Moraceae) and *Palaquium neo-ebudicum* (Sapotaceae). The canopy can reach heights of up to 30m, with emergent *Agathis* occasionally reaching 35m. Subcanopy genera include *Cryptocarya*, *Dysoxylum*, *Ilex*, *Litsea*, *Piliocalyx*, *Polyscias*, *Schefflera*, *Syzygium*, *Weinmannia* and others, and there is usually a tall shrub stratum consisting of genera such as *Dracaena*, *Ilex*, *Myristica* and *Syzygium*. Other endemic trees associated with these forests on Erromango include *Aphania neo-ebudica* (Sapindaceae), *Badusa occidentalis* (Rubiaceae), *Cupaniopsis neo-ebudensis* (Sapindaceae), *Dillenia neo-ebudica* (Dilleniaceae), *Eugenia richii* (Myrtaceae), *Evodia kayewskii* (Rubiaceae), *Ficus kajewskii* (Moraceae), *Homalanthus longipes* (Euphorbiaceae), *Tapeinopserma netor* and *Weinmannia kajewskii* (Saxifragaceae). There is typically a rich herb layer usually dominated by ferns. Ferns are also well represented among the epiphytes together with orchids, particularly species of *Dendrobium*. Lianas include *Alyxia*, *Entada*, *Freycinetia* and *Hugonia* and included among the many vines are the endemic *Parsonsia neo-ebudica* (Apocynaceae) and *Uncaria orientalis* (Rubiaceae).

⁷ <http://www.terrestrial-biozones.net/Paleotropical%20Ecosystems/Vanuatu%20Ecosystems.html>

3) Montane Cloud Forest

23. These forests range from about 500-1000 m in altitude and so confined to the highest mountains in Vanuatu such as the southeast slopes of Pico Santo (1704m) and the eastern side of Tabwemasana (1879 m). On smaller islands such as Aneityum they develop at about 300m; they are also present in the interior of Efate. They are all characterized by stunted, gnarled trees covered in bryophytes and filmy ferns. The main tree genera are *Ascarina*, *Geissois*, *Metrosideros*, *Quintinia*, *Syzygium* and *Weinmannia*. Also tree ferns of *Cyathea* and *Dicksonia* are locally common together with various other large ferns. The endemic palm *Clinostigma harlandii* (Arecaceae) may also be present but appears to be confined to the islands of Ambrym, Aneityum and Erromango. Many of the tree crowns are covered with epiphytic orchids, particularly species of *Dendrobium*, and ferns. *Astelia* (Liliaceae) is another conspicuous epiphyte. Lianas, on the other hand, are less numerous but include the pandanaceous climber *Freycinetia*. Scattered among the trees are various herbaceous patches with plants such as large leaved *Gunnera*, the grass *Isachne* and the sedge *Machaerina*. Shrubs such as *Eurya*, *Gaultheria*, *Pipturus* and *Vaccinium* can also be found in these treeless, herbaceous zones.

4) Acacia spirorbis Forest

24. Known locally as gaiac forest, this open formation dominated by the phyllodial *Acacia spirorbis* can be found on various islands including Aneityum, Erromango and Efate. The trees usually have a low to medium stature growing to a maximum of about 15m, and typically have wide-branching crowns. Dominant among undergrowth shrubs are *Croton*, *Symplocos* and *Xylosma*. In canopy openings, heliophytic grasses predominate. These include *Miscanthus floridulus* in moist areas and *Heteropogon contortus* in the dryer areas.

5) Vegetation of New Volcanic Surfaces

25. On Yasur Volcano on Tanna, the ferns *Histiopteris incisa*, *Nephrolepis hirsutula* and *Cyathea* species are widely but sparsely distributed on lava fields, but a completely different flora occurs on the disturbed cinder cones. Here the dominant species include shrubs such as *Melastoma denticulatum*, *Piper latifolium* and *Pipturus argenteus*, the grasses *Imperata cylindrical* and *Miscanthus floridulus*, and the annual herb *Emilia sochifolia*. Surprisingly orchids have also been recorded in these inhospitable areas including species of *Spathoglottis*, while on the volcanic ash of Erromango the endemic orchid *Trichochilus neobudidus* (Orchidaceae) can be found.

6) Mangroves

26. Vanuatu has a total of 20.5km² of mangrove area, of which around 80% is found on Malekula: on Efate, there is an estimated 31ha at Eratap village, and other areas elsewhere around the coast of the island. A total of 24 species of mangroves are known in Vanuatu. Mangrove areas are important habitats that provide feeding, breeding, and nursery grounds for a wide variety of shell and fin fish and other wildlife species, and also serve as carbon sink and protection from coastal storms and extreme events.

7) Coral reefs

27. As shown in Table 1, Vanuatu has more than 1 million ha of coral reefs.

Table 1. Area distribution of reefs in Vanuatu down to 400m^{8,9}

ISLANDS	SURFACE AREA (ha)				Total Reef Area
	Land	Shelf	10-100m	100-400m	
Torres	12,000	1,600	26,130	20,600	48,330
Ureparapara	3,900	289	1,650	5,150	7,080
Vanua Lava	33,000	1,640	6,500	16,390	24,530
Mota	1,500	110	850	3,170	4,130
Mota Lava	3,100	570	2,450	4,120	7,140
Mere Lava	1,500	30	550	1,780	2,360
Gaua	33,000	1,510	3,280	16,990	21,780
Rowa	10	2,630	1,700	4,270	8,600
Santo-Malo	424,800	4,500	60,000	142,970	207,470
Ambae	41,000	230	3,850	11,840	15,920
Maewo	28,000	780	6,030	33,470	40,280
Pentecost	49,000	1,730	8,950	25,000	35,680
Malekula	205,300	10,110	45,100	101,350	156,560
Ambrym	66,500	700	7,250	26,650	34,600
Epi-Paama-Lopevi	47,800	2,500	19,130	76,510	98,140
Tongoa-Tongariki	5,000	150	4,720	16,530	21,400
Emae-Makura-Mataso	3,600	2,020	4,660	30,820	37,500
Efate	92,300	8,070	28,450	95,330	131,850
Erromango	88,700	1,340	4,250	55,660	61,250
Tanna	56,100	1,310	7,450	42,440	51,200
Aniwa	800	310	1,150	5,120	6,580
Futuna	1,100	100	1,400	3,700	5,200
Aneityum	16,000	2,580	18,450	14,820	35,850
TOTAL	1,218,900	44,800	263,950	754,680	1,063,430

1.1.6 Forest resources

28. The total area of forest in the country is around 440,000ha (36% of the total land area). On many of the smaller islands, the natural forests are still largely intact, especially in the interior of the islands, and even on the larger and more densely populated islands some of the inland and mountain forests are relatively healthy. Forests and protected areas in Vanuatu provide multiple benefits to the people in the form of goods and services such as protection of water resources, protection from soil erosion, timber and non-timber forest products and a high quality environment that contributes to agriculture, fisheries and tourism sectors. Nevertheless, useful timber species have been overharvested, and presently Vanuatu imports most of its timber needs, and no longer has a significant export industry.

29. Common forest trees of economic importance include whitewood (*Endospermum medullosum*), calophyllum (*Calophyllum inophyllum* and *Calophyllum neo-ebudicum*), canarium nut or nangai (*Canarium indicum*) vesi or tora (*Intsia bijuga*), milk tree (*Antiaris toxicaria*), *Astanospermum austral*, *Pterocarpus indicus*, *Bischolia javanica*, *Gyrocarpus americanus*, *Acacia spirorbis* and tropical almond (*Terminalia catappa*). Pacific kauri (*Agathis macrophylla*) was once common on Aneityum and Espiritu Santo, but has been

⁸ David G. and Cillaurren E. 1989. A survey of village subsistence fishing in Vanuatu. Notes and documents on oceanography No. 19. ORSTOM, Port Vila, Vanuatu.

⁹ Figures for Efate include the outer islands

overharvested and now only remnant strands are found. On Erramango a reserve protects 3,200 ha of Pacific kauri. Sandalwood (*Santalum austrocaledonium*) has also been depleted, although it is still found in small numbers on several of the islands and is being promoted for replanting.

Figure 3. Distribution of major forest types for Vanuatu as defined by the VANRIS system

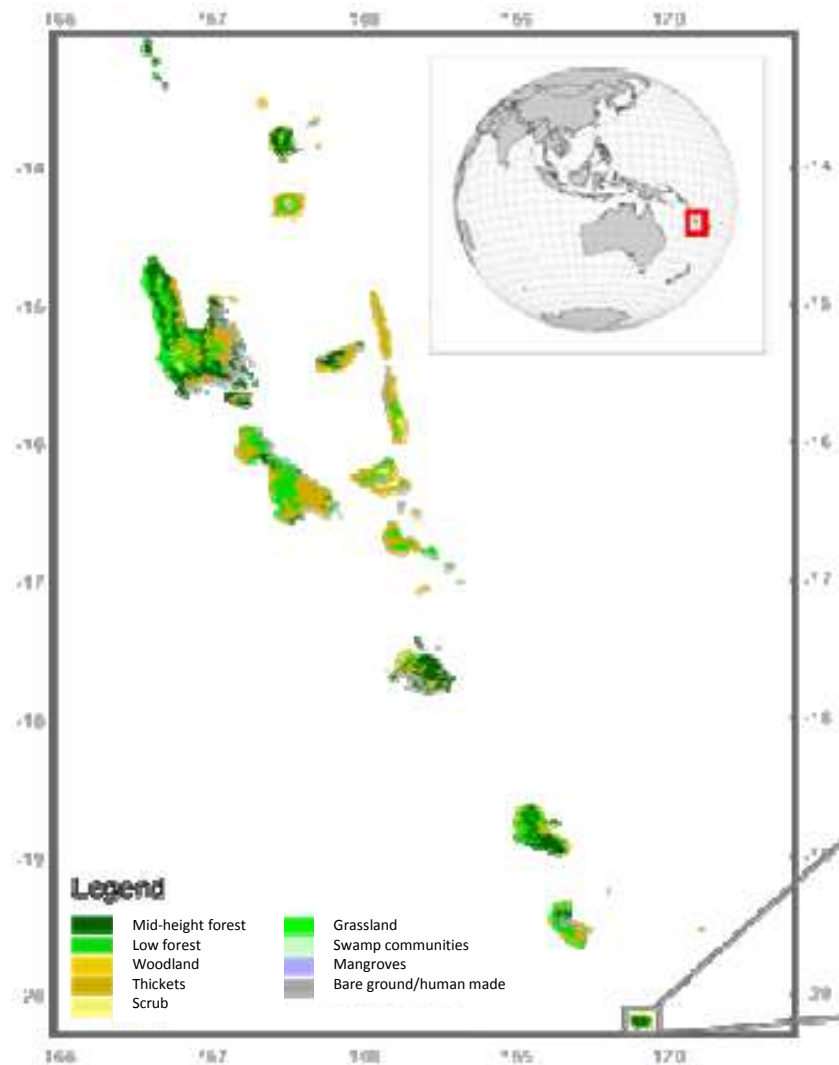


Table 2. Vegetation types by area

Vegetation type	Area (ha)	Percentage of land area
Midheight forest (20-30m)	205 307	16.73
Low forest (10-20m)	234 089	19.08
Woodland (<10m)	386	0.03
Thickets (3-8mm)	433 941	35.37
Scrub (<3m)	45 018	3.67
Grassland	51 128	4.17
Swamp communities	2 261	0.18
Mangroves	2 519	0.21
Bare ground/human made	252 256	20.56
Total land area	1 226 905	100.00

30. Non-timber forest products (NTFPs) play an important role in local livelihoods in terms of food security, customary social obligations and income generation. Traditional multi-storey agroforestry systems typically include species such as nando (*Pometia pinnata*), navele (*Barringtonia edulis*), naus (*Spondias dulcis*), namambe (*Inocarpus fagifer*) and nangai (*Canarium indicum*)¹⁰. Table 3 shows examples of species currently used as sources of non-wood forest products (NWFPs) in Vanuatu.

Table 3. Important indigenous tree species for NWFPs¹¹

	Medicinal products	Gums, resins and tannins	Oils	Cultural
<i>Agathis macrophylla</i>		*		
<i>Agathis silbai</i>		*		
<i>Antiaris toxicaria</i>	*			
<i>Artocarpus altilis</i>	*			
<i>Barringtonia edulis</i>	*			
<i>Bischofia javanica</i>	**			
<i>Burckella obovata</i>	*			
<i>Calophyllum inophyllum</i>	*			
<i>Canarium harveyi</i>		*	**	
<i>Canarium indicum</i>			*	
<i>Cordia subcordata</i>	*			
<i>Endospermum medullosum</i>	*			
<i>Fluggea flexuosa</i>	*			
<i>Garuga floribunda</i>	*			
<i>Hibiscus tiliaceus</i>	*			
<i>Inocarpus fagifer</i>	*			
<i>Intsia bijuga</i>	*			
<i>Macaranga tanarius</i>	**			
<i>Morinda citrifolia</i>	*			

¹⁰ Barrance A.J. (1995): Traditional knowledge as a basis for village forestry in Vanuatu. *Commonwealth Forestry Review* 74(2).

¹¹ Vanuatu Country Report for The State of the World's Forest Genetic Resources. Prepared by: The Forestry Department, Ministry of Agriculture, Quarantine, Forestry and Fisheries, Port Vila, Vanuatu, September 2012

	Medicinal products	Gums, resins and tannins	Oils	Cultural
<i>Pterocarpus indicus</i>	*			
<i>Santalum austrocaledonicum</i>			*	
<i>Pometia pinnata</i>	*			
<i>Syzygium malaccense</i>	**			
<i>Thespesia populnea</i>	*			

1.1.7 Land Tenure and Governance¹²

31. Land tenure in Vanuatu is highly complex, and a key determinant of natural resource management options. Vanuatu has two different systems of land tenure: a formal system inherited from the colonial period and an uncoded customary system.

32. The customary system is characterised by its elaborate nature, opacity to outsiders, and variety with notable differences over how land is exchanged, inherited or otherwise accessed both within and between islands. Under custom, the flexible transfer of land-use rights generally allows for and helps maintain the fabric of social relations. Land is seen as communally owned, to varying degrees, but is uniformly administered by patriarchs.

33. The formal system of land tenure was introduced under the colonial period and largely continued following Independence in 1980. It is based on the English law system of 'Torrens title' in which land is owned by one or more individuals or bodies corporate, and ownership is verifiable through a legally guaranteed entry on a register.

34. The Constitution of Vanuatu states that the 'rules of custom shall form the basis of ownership and use of land' (Const. art. 74) and that only 'indigenous citizens ... shall have perpetual ownership of their land' (Const. art. 75). This meant that, following Independence in 1980, all land was to be returned to customary landowners. In practice, this was complicated by a number of factors: many plantations and urban areas had been long established, erasing the markers that distinguished customary land boundaries; missionaries had collected different groups of people from their lands and into coastal villages, while others were drawn toward the attractions of colonial administrative centres; furthermore, land is not necessarily inherited by direct lineage in Vanuatu custom and there are many ways, other than by descent, that people could claim land.

35. The Constitution (Article 78(1)) also provides that "*Where... there is a dispute concerning the ownership of alienated land, the Government shall hold such land until the dispute is resolved*". Under the Land Reform Act 1980 (LRA) passed to handle this transition, expatriate "alienators" were entitled to remain on their land until either a lease was agreed or they were compensated.

36. The Constitution did not prevent the issuance of leases to foreigners (although only indigenous citizens could own freehold title), but was concerned that such leases should be fair to customary owners: consequently, Government had to consent to all leases of land to foreigners and this consent was to be withheld if the transaction was prejudicial to the interests of customary owners, the community in whose locality the land was situated, other indigenous citizens, or the Republic of Vanuatu. In cases where expatriate alienators had

¹² Based largely on Haccius J (2011): The Interaction of Modern and Custom Land Tenure Systems in Vanuatu. State Society and Governance in Melanesia. Discussion Paper 2011/1, School of International, Political and Strategic Studies, Australian National University.

vacated their land and the customary owners were unclear, the LRA gave the Minister of Lands 'general management and control' (LRA s. 8(1)), including the power to grant leases over the disputed land¹³. In practice, and despite this Constitutional safeguard, this provision of the LRA resulted in cases where leases were granted by the Government to benefit political actors and foreign investors, but at the expense of the interests of local stakeholders: in response to concerns over such abuses, it has recently been derogated (see below).

37. There are a number of conflicts between the "customary" system of land tenure and the "formal" system imposed by the colonial authorities and still used following Independence, which is based on concepts and definitions derived from English law. The formal system depends on the identification of 'a custom owner', who is able legally to sign leases: by contrast, custom itself can only provide a group of rights-holders. In a society based on shifting cultivation, more important than 'ownership' are multiple land-use rights that can be distributed among groups and individuals maintaining broad networks of social ties. However, although user rights and rights-holders are multiple, the land itself is represented by a patriarch.

38. Traditional (i.e. pre-European contact) Melanesian societies appear to have consisted of scattered groups variously led by people responsible for different activities: leaders for warfare, sorcery, rituals, different forms of food production, etc. The colonial administration 'organised' these groups into villages under the charge of an appointed chief. Disputes over chiefly titles are rife in Vanuatu. Traditional chiefly powers tend to extend to social organisation rather than land management. Under the current system, by contrast, chiefs identify customary owners of land, veto leases over that land, and assign ownership where there is a dispute. While 'chief' may appear to be a traditional concept, the position and powers of the modern day title may be very different from their traditional role.

39. In practice, conditions of customary tenure vary widely between individual and group ownership, reflecting complex and site-specific variations in power relations between chiefs and groups, and between groups and individuals. The formal tenure system has largely disregarded such complexities, preferring to identify, validly or not, a single owner who can give exclusive possession¹⁴.

40. There is no single system of marine tenure in Vanuatu. In many places, land and sea tenure rights are inherited through the male side of a family, but in some cases it passes down through the women. Customary marine tenure (CMT) not only survives throughout Vanuatu, but is going through a phase where exercising the right to exclude outsiders and regulate one's own groups' activities on the fishing ground is intensifying. Ownership of marine resources creates opportunities not only for resource management, but also for dispute. Considerable population movement in Vanuatu over the past century was associated with coastal land alienation for plantations and by churches for their settlements. Customary laws were never written down, and this has resulted in poorly remembered

¹³ Van Trease, H 1987, *The politics of land in Vanuatu*, University of the South Pacific, Suva.

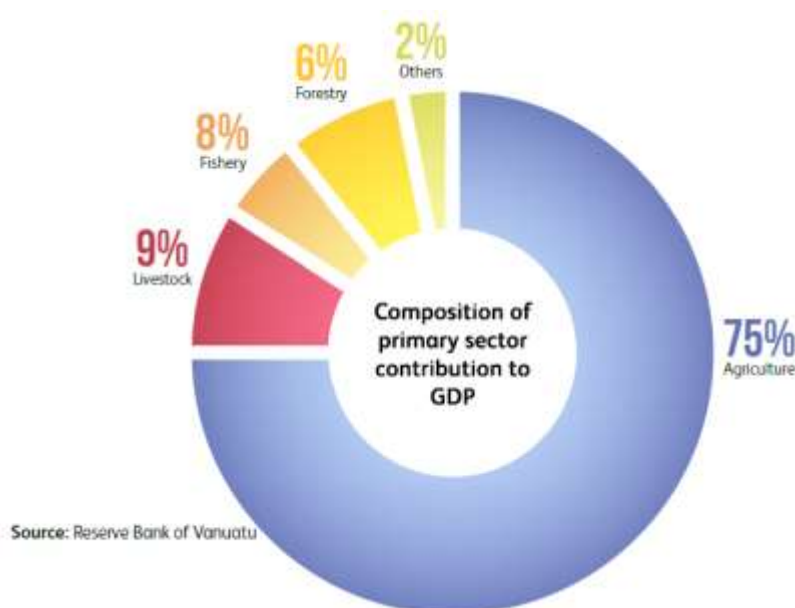
¹⁴ **Bolton**, L 1999, 'Chief Willie Bongmatur Maldo and the incorporation of chiefs into the Vanuatu state', SSGM Discussion Paper 1999/2, Research School of Pacific and Asian Studies, The Australian National University, Canberra; **Bonnemaïson**, J 1984, 'Social and cultural aspects of land tenure', in P Larmour (ed.), *Land tenure in Vanuatu*, Institute of Pacific Studies, University of the South Pacific, Suva; **Crocombe**, R 1995, 'Overview', in R Crocombe (ed.), *Customary land tenure and sustainable development: complementarity or conflict?*, SPC and University of South Pacific, Suva; Rodman, M 1995, 'Breathing spaces: customary land tenure in Vanuatu', in RG Ward & E Kingdon (eds), *Land, custom and practice in the South Pacific*, Cambridge University Press, Melbourne.

histories of traditional ownership of land and associated fishing grounds in some areas. Occasionally, a request for the identification of customary owners reopens old disputes that have been dormant for many years; or, the desire for money can lead to claims that have little foundation in true custom¹⁵.

1.1.8 Economy and Natural Resource-Based Production Sectors

41. The graphic below presents the composition of primary sector contribution to GDP in 2012. Fisheries contributed 6%, forestry 9%, livestock 8%, agriculture 75% and others accounting for 2%.

Figure 4. Contribution of primary sectors to GDP



Agriculture¹⁶

42. Vanuatu is an agriculture based economy in which 80% of the population depends entirely on subsistence agriculture for their daily sustenance and well-being. Although the other 20% reside in the urban areas, most would still rely on agricultural products from market centres for their daily source of nutrients. The 2009 census shows that despite a 30.1% increase in the total number of households from 1999, there has been a considerable decline in the number of households actively engaged in the major cash crop agriculture.

43. Vanuatu's agriculture sector is divided into three distinctive subsectors with the subsistence sector accounting for more than 75% and a growing semi-commercial sector contributing to around 15%. An agriculture commercial subsector based on a limited range of traditional cash crops but having the potential for expanding into the emerging vegetable market contributes to around 10% of total production in the sector.

44. The subsistence sub-sector is predominantly centered around root crops (Taro, Yam, Cassava and sweet potato) for consumption and cultural purposes and characterized by a total reliance on rain irrigation and rudimentary implements/tools. This subsector of agriculture is labour intensive, but utilizes completely organic farming practices. There exists

¹⁵ Moses John Amos: Vanuatu fishery resource profiles. IWP-Pacific Technical Report (International Waters Project) no.49. SPREP, 2007

¹⁶ Vanuatu Agriculture Sector Policy

a notable level of risk and uncertainty regarding the magnitude of potential yield at any given time thus giving rise food insecurity and vulnerability to shocks. The risks of food insecurity are further exacerbated by a rapid increase in imported foodstuffs.

45. The bulk of semi- commercial agricultural activities are concentrated near urban centres where high population growth rates, the development of the tourism industry, and high rates of urban unemployment are able to sustain a growing agricultural market for food crops. Recently there has been an expansion of green leafy vegetables in diets complementing the popular open pollinated local island cabbage (*Abelmoscuhus manihot*), including varieties of hybrid Chinese cabbages, tomatoes, capsicum and eggplant. Spice and herb cultivation in this subsector is a new but promising industry being led by women farmers, with potential for engagement by other vulnerable groups.

46. The commercial subsector is dominated by 4 main cash crops: 24% of ni-Vanuatu households are engaged in cocoa production, 50% in kava, 2% in coffee and 69% in coconut. The 2009 population census noted two other emerging cash crops, namely pepper and vanilla in which 1.5% and 15% of households were engaged. While there has been a slight increase in number of households growing coffee, the census also registered a significant drop in the number of households planting kava, coconut and cocoa. Such a decline may be related to fluctuations in world commodity prices, emerging markets for novel crops, loss of basic farming skills/knowledge or conversion of prime agricultural land near urban areas into residential estates to cater for rapidly expanding urban populations.

47. Copra is Vanuatu's main agricultural export commodity outweighing the contribution of cocoa and kava by a large degree. Despite this dominance, there is a general observation that in all the major copra producing islands, coconut rehabilitation programs have remained stagnant over the last 30 years with only a very small percentage of farmers engaging in coconut replanting programs.

Livestock¹⁷

48. The national cattle herd is estimated to be approximately 140,000-150,000 of which 77,000 are owned by the smallholder sector and the remainder by the plantation or large holding sector (>100 head of cattle) which includes both ni-Vanuatu and expatriate graziers. Larger holdings are concentrated on the islands of Efate and Espiritu Santo whereas smallholder cattle are widely dispersed but more prevalent on Espiritu Santo, Malo and Epi. The average ni-Vanuatu household owns 9 cattle, increasing to 13 on Espiritu Santo. Vanuatu has 2 export standard abattoirs, based on Efate and Espiritu Santo, and exported 1,200 tonnes of beef in 1992, primarily to Japan, Papua New Guinea and Solomon Islands. Exports in 1999 and 2000 respectively were 1577 and 1361 tonnes to Japan, Solomon Islands and Papa New Guinea and following a trade arrangement in 1999, also to Fiji. 684 Mt in 2002, but rose again to 1,021 Mt in 2003 and 1,049 Mt in 2006. Approximately 20% of slaughtered cattle are sourced from ni-Vanuatu producers. Quite a number of cattle are sold by subsistence farmers to regional butcheries or to villagers for traditional ceremonies and feasts. Around 16,000 head of cattle are slaughtered annually with approximately 7000 to 8000 being killed in rural areas for consumption.

49. Both smallholder and plantation grazers in Vanuatu predominantly utilise free-grazing systems. Tethering of animals occurs only occasionally and stall-feeding is not practised. The

¹⁷ <http://www.fao.org/ag/agp/agpc/doc/counprof/southpacific/Vanuatu.htm>

feeding system in both sectors is entirely pasture based and no supplements or conserved feeds are used.

50. The cattle industry in Vanuatu began in the early 1900s with the introduction of cattle to control growth of understory vegetation in coconut plantations. Today nearly all smallholder and plantation graziers graze at least part of their herds under coconuts. As copra prices continue to decline in real terms, the importance of the cattle in the cattle/coconut farming system has increased. In general, daily liveweight gains of steers grazing under coconuts is below that of animals on open pastures due to the reduced quality of shaded pastures. Reduction in liveweight gains are exacerbated by dense plantings of coconuts (>150 palms/ha) that occur on some smallholder farms. However, high quality veal is produced by specialist graziers grazing cows and calves under coconuts on Efate and Santo.

51. The bulk of plantation sector cattle production occurs on open pastures on the islands of Espiritu Santo and Efate. In well managed operations, cattle are grazed at 1.5-3.0 AU/ha, depending on agro-ecological region, and turn-off slaughter weight cattle (280-300kg carcass) at 24-36 months. Over the past 20 years, an increasing number of commercial smallholder graziers have been developing open, improved pastures. The rapid increase in stockyard infrastructures on smallholder farms over the past 10 years has improved stock management. Production per hectare from the best smallholder farms is now equivalent to that from the best plantations.

Forestry¹⁸

52. According to the National Forest Inventory from 1993, approximately 74% of the national land area (about 900,000ha) are covered with different types of forest, or considered as other wooded land. Although about 890,000ha of this is still natural forests, production forest occupies only 36% of Vanuatu's land area, and only about 20% of this are of commercial use - mainly due to inaccessibility, low tree density, cultural reasons, or because it has already been heavily logged during the eighties and nineties. While this logging has led to severe degradation of the forest, it has been estimated that about 50% of the deforestation in Vanuatu is due to subsistence land use. Large areas of logged-over forests and abandoned agricultural land have been invaded by the introduced invasive vine *Merremia peltata*, which impedes the natural regeneration of the logged forest. About 3% of the mid-to high forest (about 6,000ha) and 0.7% of low forest (about 1,400ha) are in protected areas. By 2006, about 4,800ha were covered with planted forests.

53. Until 2004, processed timber was an important export commodity for Vanuatu, but the industry has subsequently scaled back due to dwindling resources. As a result, in recent years, timber for domestic market also declined and it is being imported presently. This situation is expected to change, when the ongoing plantation programme becomes productive.

54. According to the National Agriculture Census of 2006, almost 90% of households collect food, medicines and other non-wood forest products, and depend on forests and agroforestry for wood and wood products for daily use. Non-wood forest products such as nuts, seeds and orchids are gaining significance in the domestic as well as international market. The forestry department is helping private investors to establish processing facilities to utilize and add value to these resources. One of the key resources that is expanding is

¹⁸ Vanuatu Forest Policy 2013-2023

sandalwood for which the Government of Vanuatu is providing the required support.

55. Vanuatu's land has not yet been classified according to functions or land capability classes, neither does Vanuatu have a legally defined permanent forest estate (PFE), or Government-owned forest lands. The forests of Vanuatu contain a number of valuable hard woods. National forests also supply a broad spectrum of non-wood forest products such as tubers, fruits (e.g. breadfruit from *Artocarpus* spp), nuts (e.g. from *Canarium* spp., *Barringtonia* spp. and *Terminalia* spp.), fibers, grass and leaves for thatch, other construction materials, and game (e.g. wild pigs). The rural population of Vanuatu also receives their domestic fuel from forests and trees outside forests. Brown (1997) estimated an annual per capita fuel wood consumption of 0.49 cbm. Taking into consideration the population increase during the past 13 years, Vanuatu's annual consumption of wood for fuel wood and charcoal in 2010 is estimated at 105,000m³. Tate (2008) considered the value of wood for fuel to have reached in 2007 180 million Vatu (USD1.8 million). Forests also play an important spiritual role in Vanuatu's traditional societies and provide materials for ceremonies.

56. There are at present no forest concessions in Vanuatu: timber harvesting is mostly done on a small scale with the help of mobile sawmills (Mobile Sawmill Act, GoV 1996). As a result, the recent annual timber harvests of approx. 10,000m³ have been far below the established sustainable yield levels of 68,000m³ per annum.

57. In the year 2000, the forestry sector contributed VT295 million approx. 0.9 % to the GDP (Nat. Statistics Office, 2010) with a decreasing trend. The share of forestry in all agriculture commodities was approximately 13% in 1999, however also decreasing over time. This contribution would be higher if informal forest use was also included in the analysis: ITTO (2005) cited a national census which indicated that 80% of the Vanuatu population was involved in some form of small-scale forestry, and estimated the value of forest products for subsistence use to have reached 14 million USD/annum.

58. Despite the recently low rate of forest loss when compared to other countries in the region, between the country's independence in 1980 until 1998, Vanuatu experienced widespread and largely unchecked logging for a lucrative international timber market¹⁹. This caused extensive degradation of the country's indigenous forests²⁰ and at least 40% of the commercial forest area is now considered to be degraded. In 1998, a ban on the export of whole round logs was enacted and the government expelled international loggers, dominated by Malaysian firms, from their operations in the country. As a result there are currently no active industrial logging concessions in Vanuatu and timber extraction continues primarily in the form of small-scale harvesting carried out with the use of mobile sawmills. Although these present a lesser threat compared to their industrial predecessors²¹

¹⁹ KING, P. 2007. Regional: Mainstreaming Environmental Consideration in Economic and Development Planning Processed in Selected Pacific Developing Member Countries. Technical Assistance Consultant's Report for the Asian Development Bank. Available here. [Accessed October 2013, quoted in <http://theredddesk.org/countries/vanuatu>]

²⁰ DOF (DEPARTMENT OF FORESTS). 2013b. Vanuatu Forest Policy 2013-2023. Republic of Vanuatu, quoted in <http://theredddesk.org/countries/vanuatu>.

²¹ DOF (DEPARTMENT OF FORESTS). 2013a. Readiness Preparation Proposal (R-PP), Vanuatu. 07 October 2013. Forest Carbon Partnership Facility. Available here. [Accessed November 2013, quoted in <http://theredddesk.org/countries/vanuatu>]

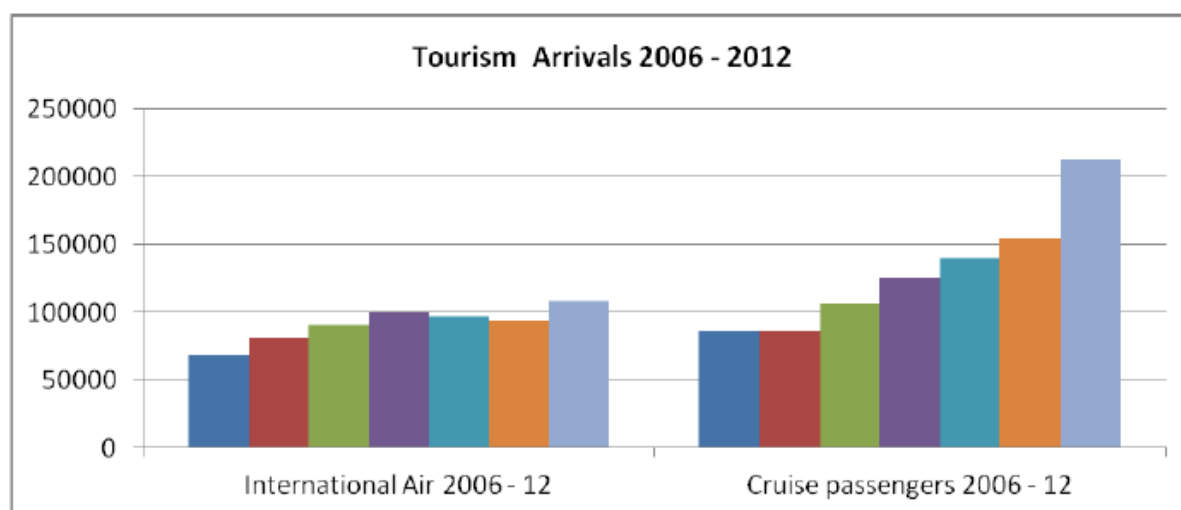
(DOF, 2013a), harvesting is still reported to exceed the rate of replanting, suggesting there is a need for improved management in the forestry sector²².

Tourism

59. Cruise ship passenger arrivals grew by approximately 15% per annum between 2006 and 2012, and then by approximately 37% between 2011 and 2012, to more than 213,000 passenger arrivals. Australians are the main current market (over 90%). There were around 230 cruise ship calls in 2014.

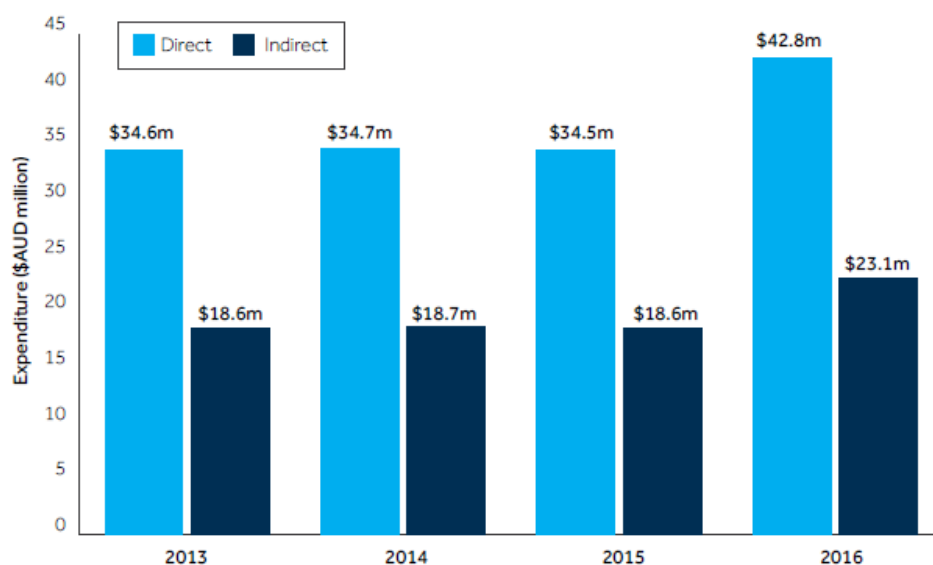
60. The Australian market accounts for about 70-75% of regional passengers, with New Zealand the next most important source market. Increasing numbers of cruise ships (P&O brand) are now being based year-round at Australian ports (Sydney & Brisbane). The general pattern is for itineraries to be focused on Australian, New Zealand and nearby Asian destinations over the September – March Australian summer period; with Pacific island destinations being favoured during the April/May – July/August period. In terms of overall passenger numbers for cruises departing and returning to Australia, Carnival Australia is the biggest operator in the region (about 60%). Royal Caribbean is the next largest (about 35%); but with no full-time Australian-based ships. In line with global trends, the sizes of vessels operating in the region are increasing, with most now having 2,000 plus passenger capacity. The majority of cruise ships visiting the Pacific islands operate out of bases in Sydney and Brisbane.

Figure 5. Growth in Tourist Arrivals 2006-2012



²² DESP (DEPARTMENT OF ECONOMIC AND SECTOR PLANNING). 2006. Priorities and Action Agenda 2006-2015. Department of Economic and Sector Planning, Ministry of Finance and Economic Management, Government of the Republic of Vanuatu. Available here. [Accessed November 2013, quoted in <http://theredddesk.org/countries/vanuatu>]

Figure 6. Projected trends in the economic impact of cruise ship tourism in Vanuatu²³



61. Cruise ship activity is concentrated on a small number of destinations, including the urban centres of Port Vila and Santo, where small scale tourism operators offering day trips to natural and cultural attractions including beaches, swimming holes, waterfalls and traditional villages; “sun and sand” localities including Champagne Beach on Santo and Mystery Island on Aneityum; and the cultural attraction of the land dive (*nagol*) on Pentecost.

Fisheries

62. Studies²⁴ have found 467 species of finfish in inland fishery areas in Vanuatu, from six major families: Pomacentridae, Scaridae, Labridae, Acanthuridae, Siganidae, and Chaetodontidae. In 2007, eleven species of deepwater bottomfish, belonging to two families (Lutjanidae and Serranidae), were reported to account for more than 80% of Vanuatu's fisheries production. Almost half of the production identified were *Etelis* spp., a third are *Pristipomoides* spp., and the rest includes *Epinephelus* spp., *Lutjanus malabaricus* and *Aphareus rutilans*²⁵. Research by ORSTOM in the 1980s on village-level fisheries in Vanuatu indicated that 43% of the marine inshore catch was finfish, 34% was shellfish, 21% was lobster, and 3% was octopus²⁶.

63. Fishing has always been considered secondary to agriculture in Vanuatu. However, a village subsistence fishing survey conducted in 1983 indicated that over 50% of the country's rural population engaged in fishing. Except for the few villages that are located inland (mostly in Santo and Malekula) all of the fishing households live near the coast, which is about 70% of the population. Throughout the archipelago, Malekula, the Banks group, Efate, Santo, Pentecost and Tanna constitute the major fishing population centres. In describing the reef resource exploitation, David (1990) noted that “fishing is simply a side-line, either for commercial purposes, to bring in extra money for the household in order to meet particular expenses such as taxes, school fees, celebrations; or for subsistence purposes, in

²³ Assessment of the Economic Impact of Cruise Ships to Vanuatu (August 2014). Australian Department of Foreign Affairs and Trade, Carnival Australia and IFC

²⁴ Australian Institute of Marine Science in Vanuatu in 1990

²⁵ Moses John Amos (idem).

²⁶ <http://www.fao.org/fi/oldsite/FCP/en/VUT/body.htm>

which case fishing activity is a regular operation, and only the surplus is marketed". Apart from the fin-fish resource, species collected mostly for their commercial value from the reefs include trochus, green snail and sea cucumber.

64. Apart from the collection of trochus and green snail for the production of button blanks in local factories, most fishing within the reefs and lagoons has been at the subsistence and artisanal levels. Reef and lagoon fish, as well as non-fish marine animals such as lobsters, are becoming increasingly important at the artisanal level. Exports of beche-de-mer and aquarium fish have been relatively small and erratic in the past. Recently, however, they have become some of the major marine export products, particularly for the aquarium fish trade. At present, trochus is one of the major inshore resources in Vanuatu, generating income for rural communities. Although green snail harvesting is done on a smaller scale, higher prices are offered for this mollusk. Due to the decline in prices of agricultural products, especially copra, coconut crabs have become a target species and form an important component of the income of people on the more remote islands²⁷.

1.1.9 Institutional framework

65. Key institutions of relevance to the project at national level include the Ministry of Climate Change Mitigation, Meteorology, Geo-hazards, Environment, Energy and Disaster Management (The Ministry of Climate Change or CCMGNDEE), the Ministry of Lands and Natural Resources (MLNR) and the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity (MALFFB).

66. The Ministry of Climate Change was established in 2013 as part of efforts to streamline Vanuatu's climate change response. It is currently home to the Department of Environmental Protection and Conservation, which is responsible for the formulation and implementation of environmental policies with the aim of ensuring ecologically sustainable development in Vanuatu. The DEPC is the national focal point for the United Nations Convention on Biological Diversity (CBD) and amongst the Department's responsibilities is to ensure that development and activities in the country are in line with Vanuatu's commitments under various international and regional environmental treaties and agreements.

67. The Ministry of Lands and Natural Resources oversees the functions of the Department of Lands, the Department of Geology, Mines and Water Resources and the Office of The Valuer General. It also works in collaboration with other Ministries, such as the Ministry of Internal Affairs through the Port Vila Municipal Council, to deal with land issues.

68. The MALFFB comprises four departments: Agriculture and Rural Development Service; Livestock and Quarantine Services; Forestry; and Fisheries. The Ministry's primary tasks include monitoring and representing these four departments, as well as coordinating efforts to create enabling conditions for sustained and broad-based national development. The ministry's vision is that the nation's agricultural, forestry and aquatic resources are efficiently and sustainably managed, so that they make a significant contribution to the country's growth and the wellbeing of the people of Vanuatu.

69. Vanuatu has two spheres of government: national and local²⁸. Both local government

²⁷ Moses John Amos: Vanuatu fishery resource profiles. IWP-Pacific Technical Report (International Waters Project) no.49. SPREP, 2007.

²⁸ [http://www.clgf.org.uk/userfiles/1/file/Vanuatu_Local_Government_Profile_2013_CLGF\(1\).pdf](http://www.clgf.org.uk/userfiles/1/file/Vanuatu_Local_Government_Profile_2013_CLGF(1).pdf)

and decentralisation are enshrined in the constitution and the main governing legislation is the Decentralisation and Local Government Regions Act 1994. Section 83 of the Constitution provides 'for the division of the Republic of Vanuatu into Local Government Regions and for each region to be administered by a Local Government Council on which shall be representatives of custom chiefs'. The Department of Local Authorities within the Ministry of Home Affairs is responsible for overseeing local government, which comprises six provincial councils and three municipal councils. Local government is responsible for various services ranging from education to regional planning.

70. Provincial rural communities are served by six local government councils. Each has a central administration, plus local areas headed by an area secretary who resides in one of the villages and reports to the secretary general of the provincial council. Provincial councils operate through a committee system that makes recommendations to full council for approval. The Minister of Internal Affairs appoints representatives to the council from amongst the women, youth, chiefs and churches. No committees are required by law. Provincial councils however do have the discretion to establish committees as they see fit. The composition of these committees must reflect the political proportionality of the council as a whole. Many establish finance, recruitment and physical planning committees. Any village or community organisational committees, for example water or environment committees, are directly under the village council but also report to the area secretaries. The provincial government is advising that community projects must always inform the responsible area secretaries and must implement activities using the provincial structure.

71. The National Council of Chiefs, also called the Malvatumaaauri, is elected by district councils of chiefs and advises the government on all matters concerning ni-Vanuatu culture and language.

72. The Local Authorities Association of Vanuatu (LAAV) was established to ensure that cooperation between local governments is maintained and to share experiences and skills and promote peer learning. It is in the process of being registered under national law, and following this will be able to affiliate to international organisations. The association is a voluntary body financed by member subscriptions. The secretariat of the association rotates amongst the councils in accordance with its constitution.

1.1.10 Policy, Strategic and Planning Framework

73. Vanuatu is fundamentally an agricultural society, where the majority of the population is involved in farm and fishing activities, either for subsistence, livelihood or cash income. The Overarching Productive Sector Policy 2012-2017 also identifies agriculture, forestry and fisheries as priority areas for economic development.

National Conservation Strategy (1993)

74. Vanuatu's first National Conservation Strategy (NCS) was prepared in 1993. The highest priority areas for implementation included the following areas: improving environmental education and awareness, improving legislation and law enforcement and strengthening the existing environmental institutions, preserving natural resources and cultural places, and using resources more efficiently. The NCS strategy established a framework whereby stakeholders could achieve national, regional and international conservation goals.

National Biodiversity Strategy and Action Plan (1999)

75. The NBSAP guides the country on measures for conservation and sustainable use of

natural resources. It also emphasizes the importance of building in-country capacity for biodiversity conservation at every level and sector: government, province, community and individual. Considerable emphasis is being placed on an improved cross sectoral collaboration as a means of realizing sustainable use of biodiversity within the limited resources and capacities available in-country. Vanuatu is attempting a more holistic and consultative process with natural resource owners' ownership being seen at the very beginning of this process. This document is currently being reviewed to incorporate the Aichi Targets which will also be mainstreamed into other sectoral policies and legislation.

Priorities and Action Agenda for Vanuatu 2006-2015

76. The Priorities and Action Agenda (PAA) 2006-2015 set out the national strategic priorities which includes 'Primary Sector Development (natural resources and the environment)'. Three important sectors highlighted are Agriculture, Forestry and Fisheries and their priority and strategic areas needed for improvement and increased production. The three sectors account for an estimated 15% of the total GDP and for almost all merchandise exports. Environment and disaster management are also highlighted in the PAA. Environmental management is the responsibility of the DEPC, although other departments including Agriculture, Forestry and Fisheries also have some responsibilities in relation to environmental conservation.

77. The final draft National Sustainable Development Plan which will replace the Priorities and Action Agenda has three main pillars: Environment, Social and Economic. Culture is the foundation of this national development plan. The Environment pillar covers the natural resource sectors including Biosecurity and climate change.

Overarching Productive Sector Policy (2012-2017)

78. Biodiversity-oriented strategies have also been mainstreamed into the recently adopted OPSP. The policy is being driven by the Prime Minister's Office with a focus on the three main key productive sectors, agriculture, fisheries and forestry. The main focus of the policy has been food security, livelihoods and the commodity export industries of Vanuatu. The success of these areas is the sustained growth in the productive sector, which is recognised as being heavily dependent on the sustainable management of the natural resource base.

79. The OPSP also recognises the importance of biodiversity and ecosystem services, in particular with regard to food production, provision of raw materials, recreational opportunities and cultural values. The policy therefore encourages communities to support the establishment of "Community Conservation Area", as provided for under the Environmental Protection Act [Cap 283].

80. The issue of lack of sustainable and appropriate technologies for sustainable practices had rarely been addressed prior to the OPSP. These issues are now being addressed in this policy, thereby allowing a clear integration of environmental considerations into productive sectors.

Environment Policies

81. Vanuatu's National Biodiversity Strategy and Action Plan (NBSAP) was developed in 1999. The country is now reviewing the NBSAP to meet the 2020 Aichi Targets set at the CBD COP 10 in Nagoya in 2010. There is no national PA policy.

82. With support from GIZ and SPC, the Department of Environmental Protection and Conservation (DEPC) has generated an initial draft of the National Environment Policy (NEP),

following which SPREP has supported DEPC in drafting the National Environment Management Strategy (NEMS). These two instruments were subsequently combined (with support from SPREP and funding from GEF/FAO FPAM project) in November 2015 into the National Environment Policy and Implementation Plan (NEPIP).

83. The NEPIP is in the process of being aligned with the National Sustainable Development Plan (especially the environment pillar), setting targets and indicators, a process which will have been completed by the time this project is submitted for approval.

Vanuatu Forest Policy (2013-2023)

84. The recently adopted Forest Policy of 2013-2023²⁹ has ten guiding principles of which four cover, or have links to, biodiversity and conservation: these principles are Sustainable Forest Management, Forest Conservation, Forest Industries and Institutional Setup. The policy has twenty specific objectives, of which the first four contribute to sustainable forest management. A Policy Directive covering Sustainable Forest Management is included in the Policy.

85. This directive covers management of natural forests in particular under three of its objectives; Objective D12, on Watersheds and Soils, Objective E15 on Wetlands, Coastal Areas and Mangrove Forests and Objective F16 which encompasses Land Use Planning.

86. The third Directive in the Forest Policy focuses entirely on Forest Conservation and Environment. Its objectives are primarily focused on Forest Protected Areas and the biological and cultural diversity of forests. The directive allows for environmental considerations to be taken into account at a much more sectoral level, and for biodiversity concerns to be focused on the diversity of forests as well as Forest Protected Areas. The directive also allows for the Forestry Department to work actively with relevant stakeholders in Forest Protected Area management, especially in the conservation of the cultural and biological diversity of forests.

87. In relation to Protected Areas, the Policy aims to actively manage and protect 30% of Vanuatu's natural forests, and to:

- Establish and strengthen systems of traditional taboos and protected areas to protect biodiversity, ecosystems, environmental services and conserve forest carbon (DEPC, communities, Province, DoF, NGOs, VKS);
- Establish and manage Community Conservation Areas (CCAs), as foreseen under the Environmental Management and Conservation Act (2003), to contribute to the conservation of forest biodiversity and forest carbon (DEPC, DoF, Province, NAB, DoL);
- Protect and manage unique, vulnerable or threatened forest habitats and ecosystems (all stakeholders)
- Establish clearly defined and regulated buffer zones around protected areas and other sensitive areas (landowners, DEPC, DoF Communities, and Province);
- Enforce protection status of conservation areas (Chiefs, Landowners and DEPC, Province, DoF)

88. In relation to Biological and Cultural Diversity, the Policy aims to maintain the biodiversity and ecological integrity of forests and trees, and to:

²⁹ http://www.nab.vu/sites/all/files/documents/08/08/2013%20-%2017%3A35/vanuatu_national_forest_policy_2013_to_2023.pdf

- Protect and manage endemic, rare, threatened and endangered species in the forest environments (landowner, DEPC, communities, DoF, Province)
- Conduct a national biodiversity survey to improve the knowledge on biological values and to identify important biodiversity sites (DEPC, VKS, DoF, NGOs, DoL)
- Promote in situ and ex situ conservation, techniques and practices to conserve the gene pool (DoF, Province, NGOs)
- Utilize genetic material exchange agreements to enable biodiversity conservation, ensuring the principles of MAT –Mutually agreed terms and PIC-Prior Informed Consent (DoF, DEPC)
- Develop a biodiversity strategy and action plan (DEPC, DoF)
- Maintain and expand the botanical collections of the National Herbarium & Seed Storage Facility (DoF, VKS, Floral Stakeholders)
- Establish a national botanical garden (DoF, Ind, Others)

89. In addition to the sector policy, there are a number of sub-sector strategies, for kava (complete), coconuts (final draft), and coffee and cocoa (both in draft).

National Livestock Policy (NLP) 2016-2030 (in Final Draft form)

90. The vision of the Livestock Policy (which is up for review in 2020) is that “the livestock sector is modern, sustainably managed to benefit all its stakeholders, contributes to greater socio-economic development, and in its endeavours ensure sound environmental and climate-proofing practices, including, achieving a national cattle herd of 500,000 heads by year 2025”, from its current level of 140-150,000 (see paragraph 48). One of the guiding principles of the policy is to “promote ‘No Regrets Development’ such that NLP directives and strategies will not contribute to further climate change impacts or environmental degradation but rather facilitate adaptation, risk reduction and environmental integrity”. The NLP places a strong emphasis in particular on the development of the smallholder livestock sector nationwide, through the promotion and creation of incentives to attract more people into livestock farming, the introduction of new genetic materials and the pursuance of the national livestock restocking programme.

Vanuatu Strategic Tourism Action Plan 2014-2018

91. The Vanuatu Strategic Tourism Action Plan (VSTAP) for 2014-2018 recognises the importance of cultural and environmental issues. Its vision is that “*Tourism celebrates Vanuatu’s culture and environment, empowers its people and captivates its visitors throughout its islands*”) and acknowledges that “*currently the sustainability ethos in Vanuatu is not apparent beyond agencies that have a particular interest... There is no emphasis on managing... the environment that tourism depends on or on addressing poverty alleviation through tourism development*”.

Agriculture

92. The Vision of the Vanuatu Agriculture Sector Policy is that agricultural food and cash crops of Vanuatu are sustainably and profitably managed, contributing to sustainable development for the wellbeing of all people in Vanuatu by 2030, and its goal is that The nation’s agricultural resources are managed in an integrated and sustainable manner to provide food and improved incomes as well as contribute to environmental and social services to enhance wellbeing of all people in Vanuatu.

93. The specific objectives of the policy in relation to environmental protection and sustainable farming are i) environmentally friendly agriculture and ii) agriculture soils

improved and conserved. The related policy directives are to a) mainstream environmental considerations into agriculture practices, b) incorporate sustainable farming practices such as agro-forestry and soil improvement technologies in all agriculture practices and c) incorporate organic production in all agriculture practices.

Fisheries policy

94. A Fisheries Policy is currently (at the time of project formulation) under preparation and is expected to be available in draft form in June 2016. It is expected that the provisions of the policy will reflect the approach adopted by the Department of Fisheries to date, which is based on local communities and traditional authorities being responsible for management, with technical guidance being provided by the Fisheries Department. As long ago as 1994 the Fisheries Department came to realize that managing most of the coastal fisheries from Port Vila was impossible: the costs of research, monitoring, and enforcement, in the multitude of small fisheries associated with Vanuatu's several hundred coastal villages would outweigh the benefits by several orders of magnitude. The Department continues to play a vital indirect role in management by working in the villages to help combine local knowledge with modern research based knowledge to improve village based resource management.³⁰³¹ The department also has species-specific policy and action plans, especially for fisheries target species and for example turtles, marine mammals and migratory birds. A number of fishery species are also regulated through size limits and for quota system.

1.1.11 Legislative Framework

Environmental Protection and Conservation Act No. 12 CAP 283

95. This act [Cap 283] includes legal provisions for conservation, in which it allows communities who have identified endemic or endangered species, or which contain unique genetic, cultural, geological or biological resources, to register with the Department of Environment. The act also recognises an area or site to be legally recognised if it is an important habitat of species of wild fauna or flora of unique national or international significance; provides critical ecosystem services such as (but not limited to) watershed management and climate change adaptation and mitigation; merits protection under the Convention Concerning the Protection of World Cultural and Natural Heritage and any other relevant International or Regional Conventions.

96. There is provision for the set-up of a National Biodiversity Advisory Council (NBAC), the members of which will be appointed by the Minister, with the main role of assessing and approving or disapproving research proposals submitted to the Department. There has been progress with the formal appointment of the NBAC members by May 2016, who will include representatives of the MALFFB through the Department of Forests, the Department of Fisheries and the Department of Agriculture, while the rest of the members will come from other relevant organisations including the Department of Environmental Protection and Conservation. Whilst the responsibilities of the DEPC encompass all biodiversity and conservation thematic areas, there are two important natural resource sectors that assist with implementing Vanuatu's obligations under the Convention on Biological Diversity: the fisheries sector and the forestry sector. The legislation governing each sector contains provisions for conservation and biodiversity.

³⁰ Johannes, R. (1994). Government –Supported, Village-Based Management of Marine Resources in Vanuatu. Report 94/2, Forum Fisheries Agency, Honiara.

³¹ <http://www.fao.org/fi/oldsite/FCP/en/VUT/body.htm>

Customary Land Management Act (2013)

97. This act (CLMA) updated the provisions of the 1980 Land Reform Act (see paragraph 35). It strengthens the role of customary institutions in determining land ownership, defining three levels of such institutions (*nakamals*, custom area land or, in the case of appeals to the processes at these two levels, island land courts). It also required any bills presented to parliament in relation to land issues to go through the National Council of Chiefs (*Malvatamauri*) for consultation. The CLMA also removes the power of the Minister of Land to unilaterally approve leases on disputed lands, a situation which had left open the possibility of corrupt agreements between a Minister of Lands and a developer to approve leases without paying due regard to national or local interests, as he or she was legally obliged to. The CLMA instead gives the option of the parties who are in dispute over an area of land to agree for the lease to be issued.

98. The CLMA also legalized the Land Management Planning Committee (which had previously been operating as only an administrative body within the land administration), requiring that lease applications on customary land must be subject to approval by the Committee before beginning the process of identifying custom owners, in accordance with criteria of national interest. The Land Management Planning Committee is composed of an independent chair (not a public servant), the director of the Environment Department, the head of the Vanuatu Cultural Centre, the principal physical planner for the country, director of the Lands Department, and a planner from the province or municipality in which the land is located.

1.1.12 Land Use Planning and Environmental Decision Making

Land Use Planning

99. A national Land Use Planning and Zoning Policy is currently being drafted³². Land use planning is overseen by the Ministry of Lands and Natural Resources. According to the current Physical Planning Act, the Physical Planning Unit within the Department of Local Authorities holds implementation responsibility for land use planning (Minister of Internal Affairs). In practice the Physical Planning Unit supports provincial councils in their planning activities and implementation of the decentralization policy, assesses applications under the Foreshore Development Act, and has spearheaded development of the National Urban Policy Statement.

100. Provincial Councils are currently required to simultaneously consider development planning under the Decentralisation Act as well as ensure that land use planning takes place under the provisions of the Physical Planning Act. With the introduction of this national land use planning policy, local governments will require increased support from the Department of Local Authorities to effectively meet its mandated planning responsibilities. This includes support for Area Councils within individual provincial governments.

101. Although the current institutional arrangements for formal land use planning work adequately, there are already resourcing problems due to high work volumes and low staffing levels. For the achievement of this national land use planning policy's objectives, institutional arrangements in the Ministry of Internal Affairs will require reorganisation and strengthening. This draft Land Use Policy recommends the establishment of a central office

³²

<http://theredddesk.org/sites/default/files/Vanuatu%20Land%20Use%20Planning%20and%20Zoning%20Policy%20Draft.pdf>

for land use planning within the Ministry of Internal Affairs, similar to or an expansion of the Physical Planning Unit, providing an institutional home for the administration of this policy, as well as a source of human and material support to land use planning practitioners at all levels, urban and rural. All other government agencies would have a responsibility to ensure that their activities support the implementation of this policy.

102. The National Land Summit of 2006 recommended that a committee be established to provide oversight on all land use and management processes: the now functional Land Management Planning Committee (which has now been legalised under the CLMA, see paragraph 98) has as its core role advice-giving on leases and lease conditions. However, the draft Land Use Policy recommended that this role be expanded to provide and advice and recommendations on land use planning issues, and provide oversight on the work of the central Land Use Planning Office.

Environmental Impact Assessment (EIA)

103. Environmental Impact Assessment³³ is overseen by the Director of Environment and Conservation of the Ministry of Lands and Natural Resources. Developments that require EIA includes tourism developments close to coastal area, logging along river bank or village, livestock farming, and bioprospecting activities close to Community Conservation Areas. Initial screening of the need for a full EIA is carried out through a Preliminary Environmental Impact Assessment (PEIA), which is required to be done by any Ministry, Department, Government Agency, local government or municipal council that receives an application for any project, proposal or development activity. If it is confirmed that an EIA is required, the study is scoped and terms of reference developed by the Director and EIA Review Committee; the proponents are required to issue public notice concerning the project proposal, inviting submissions from interested and relevant parties; and consultations are held with all relevant stakeholders, custom landowners, chiefs and relevant parties. Once the EIA study is conducted and the EIA report prepared, a second consultation can be carried on the final report, a final review is done by the Director and EIA Review Committee, and recommendations on the proposal are made to the Minister, who is then responsible for considering the recommendations and making a decision accordingly.

1.1.13 Protected Areas Frameworks

104. Vanuatu has three different approaches for managing conservation or protected areas, reflecting the fact that these issues are covered by the legislation governing three separate sectors: environment, fisheries and forestry. The Department of Environmental Protection and Conservation (DEPC) is now working with relevant natural resource sectors to ensure that there is one national protected or conservation area management system through the Programme of Work on Protected Area (PoWPA) project. This may lead to amendments in existing relevant legislation to allow the one national process to be adhered to so that there is a consistent national coordinated approach for legal recognition of protected or conservation areas. The Environmental Protection and Conservation Act [CAP 283] allows legal protection of all existing forms of conservation or protected areas, including World Heritage Sites, sacred sites and tabu areas.

³³ <https://mol.gov.vu/index.php/en/others/environment/25-environmental-impact-assessments/196-environmental-impact-assessments>

1.2 TARGET LOCATIONS

105. The project will work at field level in 5 target locations, where it will demonstrate the generation of multiple environmental and social benefits through the application of the “ridge to reef” model of resource management. The principal criterion used for the selection of these target localities was therefore the *existence of global environmental values that are under threat, and whose maintenance requires the application of a landscape-wide “ridge-to-reef” approach*.

Figure 7. Locations of target areas



1.2.1 Justifications for selection

106. Three of the target locations (on Aneityum, Tanna and Efate) have not been directly covered by previous GEF projects; in the other two (South Pentecost and Gaua), the project will build upon advances made by regional GEF4 project 3819 (“PAS: Forestry and Protected Area Management). The bulk of project effort and resources will be focused on the three new locations; on the others, it will take advantage of the institutional and social bases supported through the previous project and therefore require a lower level of investment, and on Gaua in particular project actions will be relatively limited, focusing on adding the incremental focus of the present project to the earlier investments.

- 1) **Aneityum Island:** There is a clear ridge-to-reef argument here, as the hillsides are subject to extreme levels of erosion, resulting in the deposition of sediment on the fringing reefs. This process predates European contact, but there is still potential to generate GEBs through addressing it: there have been successful pilot experiences of revegetation, resulting in SLM benefits, and conditions are favourable for the recovery of the coral

reefs and their associated BD, if sediment inputs are reduced. This in turn has the potential to generate EBA benefits given the CC buffering role of healthy reefs. There are also interesting sector and social issues on Aneityum with environmental links: there are extremely high levels of cruise ship visitors (100 ships/year), which are creating unsustainable demand for lobsters and NTFPs; the cruise ship activity has a significant potential to generate revenues in support of environmental protection and management, but this has yet to be realized to any significant degree.

- 2) **The Middle Bush area of Tanna Island:** three alternative areas of Tanna were considered, namely the north and the south drainages of Mt. Tukumera, and the Green Hill/Middle Bush area. Although Mt. Tukumera is of high global BD significance, there appeared to be insufficient productive activity and associated threats on its southern drainage to warrant project activity there; it was similarly difficult to identify a clear landscape-related threat scenario on the northern drainage, with the added complication that the presence of the volcano there meant that natural levels of reef sedimentation resulting from runoff from the ash field would make any benefits potentially generated by the project through upstream watershed management of little relative significance. It was instead proposed to focus on the north of the island, going beyond the Green Hill area that was originally considered to include the rest of the “Middle Bush” area: this area has remnants of high endemism forest with clear anthropic pressures including gardening and livestock, with the potential to introduce issues of biological connectivity between these forest remnants.
- 3) **The north of Efate Island:** This island and its global environmental values face clear threats in the form of demographic influxes from other islands, expansion of residential and tourism developments in coastal zones, overfishing, and expansion of ranching into the forests of the interior of the island. There is concern on the part of local stakeholders regarding the effects of this on water supply, and a strong local movement (in the form of a proposal for the establishment of the Efate Land Management Area or ELMA in the middle of the island) on which the project can build. This area also enjoys high visibility, as it is on the island where the capital, Port Vila, is located.
- 4) **South Pentecost island:** This is one of the areas of attention of the current GEF4 project. Local stakeholders there have expressed interest in expanding activities beyond the area currently covered by the GEF4 project to include higher altitude forests as well as marine areas, giving the potential to introduce a Ridge-to-Reef approach that was lacking from the GEF4 project. The fact that the GEF4 project has already been working there means that there is a good opportunity to get project activities off to a flying start and generate significant advances early on. This new project would not however be a simple continuation of the GEF4 project, but would add elements that the GEF4 did not aim to address.
- 5) **Gaua:** this island was also targeted by the existing GEF4 project. There are a limited number of issues that were identified during the course of the GEF4 project (but that it was not contemplated that the GEF4 project would cover), which can be addressed through this new project in such a way as to consolidate capacities on the island, without detracting significantly from the activities of the project on its four “core” islands.

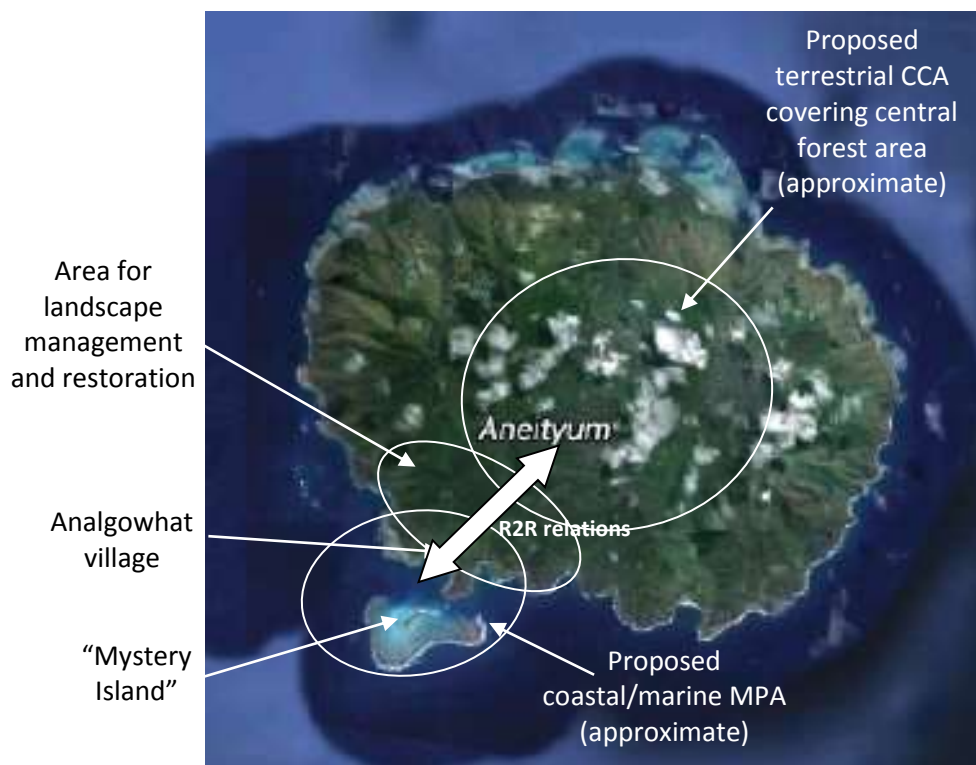
1.2.2 Characterisation of the target localities

1.2.2.1 Aneityum

Overall characteristics

107. Aneityum is the southernmost inhabited island of Vanuatu and belongs to the province of TAFEA, which also covers the islands of Erromango, Futuna and Tanna. The island is roughly circular, with an area of 159.2 km²; its highest point is Mount Inrerow Atamein, with a height of 852m. The larger of its two villages is Anelghowhat, on the south side. The island suffered a major population crash following European contact in the 18th century, due to human trafficking (“blackbirding”), falling from an estimated 12,000 to only around 300 in 1930. By 2009, the population had risen to 915.

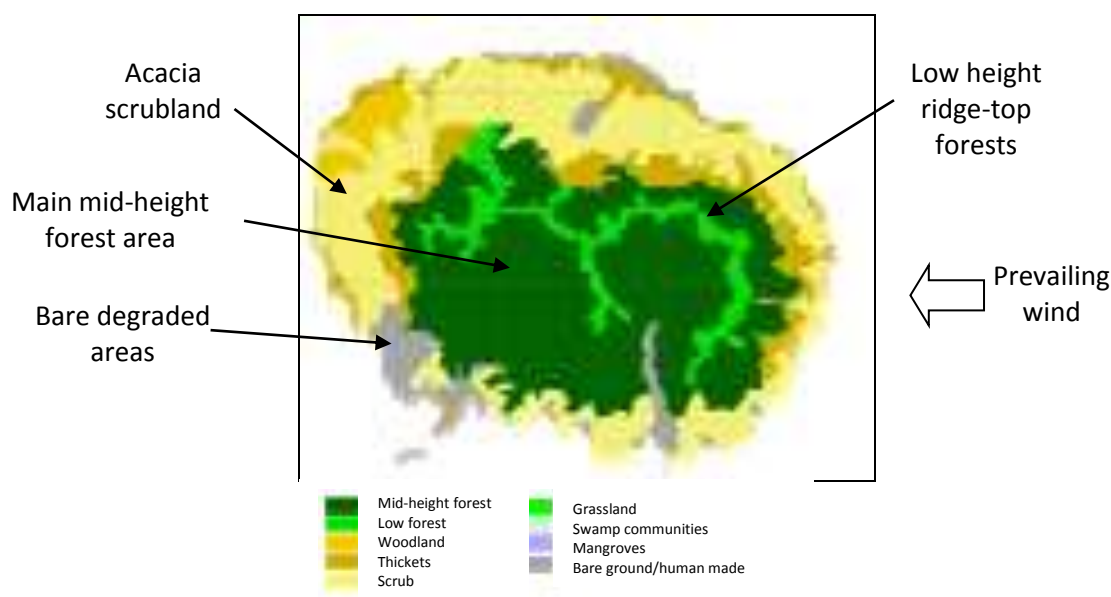
Figure 8. Aneityum target locality



Biodiversity

108. The Mixed Lowland Rainforest areas on Aneityum contain endemic trees such as *Boehmeria anisoneura*, *Canarium aneityensis*, *Couthovia neo-ebudica*, *Cryptocarya wilsonii*, *Cupaniopsis aneityensis*, *Decaspermum neo-ebudicum*, *Dedea neo-ebudica*, *Dolicholobium aneityense*, *Elaeodendron artense*, *Endiandra aneityensis*, *Ficus acrorrhyncha*, *Geissois denhamii*, *Grewia inmac*, *Guettarda kajewskii*, *Hedycaria neo-ebudica*, *Homalium aneityense*, *Ixora aneityensis*, *Kermadecia lutea*, *Leucosyke corymbulosa*, *Ligustrum neo-ebudicum*, *Litsia aneityensis*, *Myrtus aneityensis*, *Palaquium neo-ebudicum*, *Pittosporum aneityense*, *Sideroxylon aneityense*, *Semecarpus tannaensis*, *Sideroxylon aneityense*, *Syzygium aneityensis*, *Tieghemopanax neo-ebudicum*, *Weinmannia macgillivrayi*, and the palm *Kajewskia aneityensis*. Endemic shrubs in these rain forests include *Cyrtandra aneiteensis*, *Elatostema macrophyllum* and *Psychotria aneityensis*, while other endemics include epiphytes such as the orchid *Eria kajewskii*, the vine *Faradaya neo-ebudica*, and the parasites *Loranthus aneityensis* and *Medinilla neo-ebudica*.

Figure 9. Forest types on Aneityum³⁴



1.2.2.2 Tanna Middle Bush

Overall characteristics

109. Tanna is home to the headquarters of the TAFEA provincial government, at Isangel. The island is 40km long and 19km wide, with a total area of 550 km². With a population of around 29,000³⁵, Tanna is the most populous island in the Tafea Province and one of the most densely populated in the country. In contrast to many other islands where missionary and colonial influence resulted in the concentration of population around the coasts, the population in Tanna is spread throughout almost all of the island, from the coastal areas right up to the foot of the interior mountains.

110. The island is one of the most fertile in Vanuatu, due in large part to enrichment of the soil by ash deposits from the active Yasur volcano, and produces kava, coffee, peanut, root crops, fruits and vegetables. Tourism has become more important as tourists visit the volcano and the traditional culture practised there.

Vegetation of Tanna

111. The Department of Forestry Vegetation and Land Cover Map classifies most of the land area of the island as cultivated, including annual crops and fallow: more than 50% of the original forest cover has been destroyed as a result of population density and land use intensity for agricultural activities.

112. Thicket dense vegetation is more dominant on south Tanna, covering the Mt. Milen area, and extends to the interior ridge of the island on the western side of Yasur volcano. Blocks of the same vegetation also occur on the southwest and northwest of the island. Scrub and thicket open forest vegetation surrounds the Yasur volcano in the southeast. Mid-height forest, open canopy covers some parts of south Tanna; and low forest, open canopy is found towards the south western side of the island extending to the mount Tukasmera and Mt. Milen. Patches of similar forest types are found in some parts of middle bush and north Tanna. Common dominant species found within these vegetation types are *Hernandia*

³⁴ http://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Vanuatu_R-PIN_07-30-08.pdf

³⁵ 2009 National Census - Government of Vanuatu

moerenhoutiana, *H. peltata*, *Weinmannia denhamii*, *Syzygium soxylum*, *mooroides*, *Dysoxylum gaudichaudianum*, *Burchella obovata*, *Plandonella linggensis*, *Dillenia biflora*, *Mangifera minor*, *Elattostachys falcata*, *Serianthes vitiensis*, *Metrosideros collina*, *Acacia spirorbis* and *Ficus* spp. The only remnant mid-height forest, closed canopy blocks are found in the north of the island at Greenhill and the north middle bush area, in the vicinity of the project's target locality. Dominant species are also similar to those mentioned above.

113. There are mangrove forests at Port Resolution in the south-east of the island, with 2 or 3 of the country's 24 species represented.

114. Local farmers throughout the island have established woodlots using the Department of Forest's five national priority plant species, sandalwood (*Santalum austrocaledonicum*), whitewood (*Endospermum medullosum*), mahogany (*Switenia macrophyllia*), nangai (*Canarium indicum*) and natapoa (*Terminalia catappa*).

Biodiversity of Tanna

115. Due to the young geological age of Tanna, its biodiversity is not as diverse as the older islands of the Western Belt and the Eastern Ridge, but it is nonetheless home to a wide range of endemic and threatened species. The island includes one of country's Key Biodiversity Areas (KBA), which ranges from Mount Milen and Mount Tucusmera as far as the Green Hill area where the Nusumetu conservation area, and the project's target area, is located.

116. The island's avifauna is diverse, including 37 birds out of the total of 121 birds recorded in the country. The IUCN Vulnerable Collared Petrel, *Pterodroma brevipes* breeds in the interior areas of Mount Tucusmera and Mount Milen, and inhabitants of Green Hill report a colony of a sea bird (assumed to be the Collared Petrel) in the Nusumetu forests conservation area. The Vanuatu population of this species is considered to be a new subspecies, *P. brevipes magnificens*³⁶.

117. Endemic bird species on the island include the Vanuatu Fruit Dove (*Ptilinopus tannensis*) and the Vanuatu White-eye (*Zosterops flavifrons*). The IUCN Vulnerable Incubator Bird *Megapodius freycinet layardi* is found in lowland forest but can also be found at moderate altitudes. Its nesting sites are threatened by encroaching agricultural and other development activities. It is likely that this species will also become extinct if there is no sustainable land management and if no conservation measures are undertaken in places where they currently inhabit. Other species found are *Ducula pacifica* (Pacific Imperial Pigeon), *Cardinalis myzomela*, *Ptilinopus greyii*, *Gallus gallus*, *Falco peregrinus*, *Gallirallus philippensis*, *Porphyrio porphyrio*, *Chalcophaps indica*, *Zosterops lateralis*, *Columba vitiensis*, *Macropygia mackinlayi*, *Halcyon chloris*, *Trichoglossus haematodus*, *Aerodramus vanikorensis* and the introduced invasive *Acridotheres tristis* (Indian Mynah).

118. Out of the eight insectivorous bat species in Vanuatu, two (the Little Bentwing-bat *Miniopterus australis* and the Small Melanesian Bentwing-bat *Miniopterus macrocneme*) have been reported on Tanna³⁷.

119. Reptile species on the island include the gecko *Lepidodactylus lugubris*, which is commonly found in low elevation forests, cultivated areas, villages and towns; the common *Gehyra oceanic*, which occupies a range of habitats including mangroves, inhabited areas,

³⁶ *Pterodroma brevipes magnificens* (Bretagnolle & Shirihai, 2010): Banks Islands, Vanuatu. Bull BOC 130(4).

³⁷ Flannery T., 1995. Mammals of the South-West Pacific & Moluccan Islands.

cultivated areas, and to a lesser extent primary forest; the nationally endemic gecko, *Lepidodactylus vanuatuensis*; *Nactus multicaarinatus* (only a female population), which lives mostly on the ground under stones and dead logs in different types of habitats right through to primary forest areas; *N. pelagicus*; the regional endemic *Caledoniscincus atropunctatus* (limited to New Caledonia, Loyalty Island and southern Vanuatu), which has a restricted distribution in dry open canopy forest areas, but is abundant in larger patches of coastal forest or interior hardwood mixed forests; the national endemic *Cryptoblepharus novohebridicus*; and other Scincidae species include *Emoia caeruleocauda*, *E. cyanogaster*, *E. cynura* and *E. impar*.

120. Seventeen freshwater fishes (15 fishes, 1 microphis and 1 eel fish) and 7 crustaceans (3 prawns, 3 shrimps and 1 crab) have been found on the island³⁸ (two fish species, *Poecelia reticulata* and *Gambusia affinis*, were introduced as biological control agents against malaria mosquito larvae). Freshwater species observed in the Nusumetu conservation area stream during project preparation studies included the nationally endemic Goby fish species *Sicyopterus aiensis*, the giant mottled eel *Anguilla marmorata*, prawn species *Macrobrachium plar*, *M. australis* and *M. latimanus*, the crab *Ptychognathus pusillus*, the freshwater snail *Neritodryas subsulcata* and the introduced invasive mosquitofish *Gambusia affinis*. The land snail species of *Placostylus bicolor* is also found in the Nusumetu conservation area.

121. Butterflies on Tanna include 8 species of Pieridae, 1 species of Papilionidae, 20 species of Lycaenidae and 9 species of Danainae family. Nationally endemic butterfly species include *Deudorix mathewi narua*, *Polyura sacco santoensis*, *Polyura sacco sacco*, *Catopyrops nebulosa nebulosa*, and *Jamides pulcherrima*.

122. Locally endemic plant species on the island include *Cryptocaria tannaensis*, *Sterculia tannaensis*, *Semercarpus tannaensis* and *Shifflera tannae*. The endemic palm species *Carpoxylon macrospermum*, *Veitchia* sp. and *Caryota ophiophelis* are also found on the island: it is one of only 3 islands in the country where the monospecific palm genus *Carpoxylon* (*C. macrospermum*) naturally occurs in the wild, and it also hosts genetic variants of *Carpoxylon*³⁹. These species are restricted to remnant natural vegetation areas and custom sacred sites: natural stands of *Carpoxylon* and *C. ophiopellis* are found in Nusumetu Conservation Area at Green Hill, within the project's target locality.

123. The island is also important for agricultural biodiversity: it is one of the two centres of diversity of kava⁴⁰. In general, diversity beneath the species level has only been classified by indigenous knowledge systems that vary from one language group to another and are not documented⁴¹.

The Middle Bush Area

124. The "Middle Bush" is a north-south ridge, at around 400m elevation, bisecting the northern half of the island. In the north it is surrounded by a circle of hills (including the Nusumetu Conservation Area) separating it from the sea: these hills are dissected by a number of watercourses which drain westwards, northwards and eastwards into the sea. The Middle Bush area includes significant areas of coffee plantations: coffee has been

³⁸Keith et al., 2010

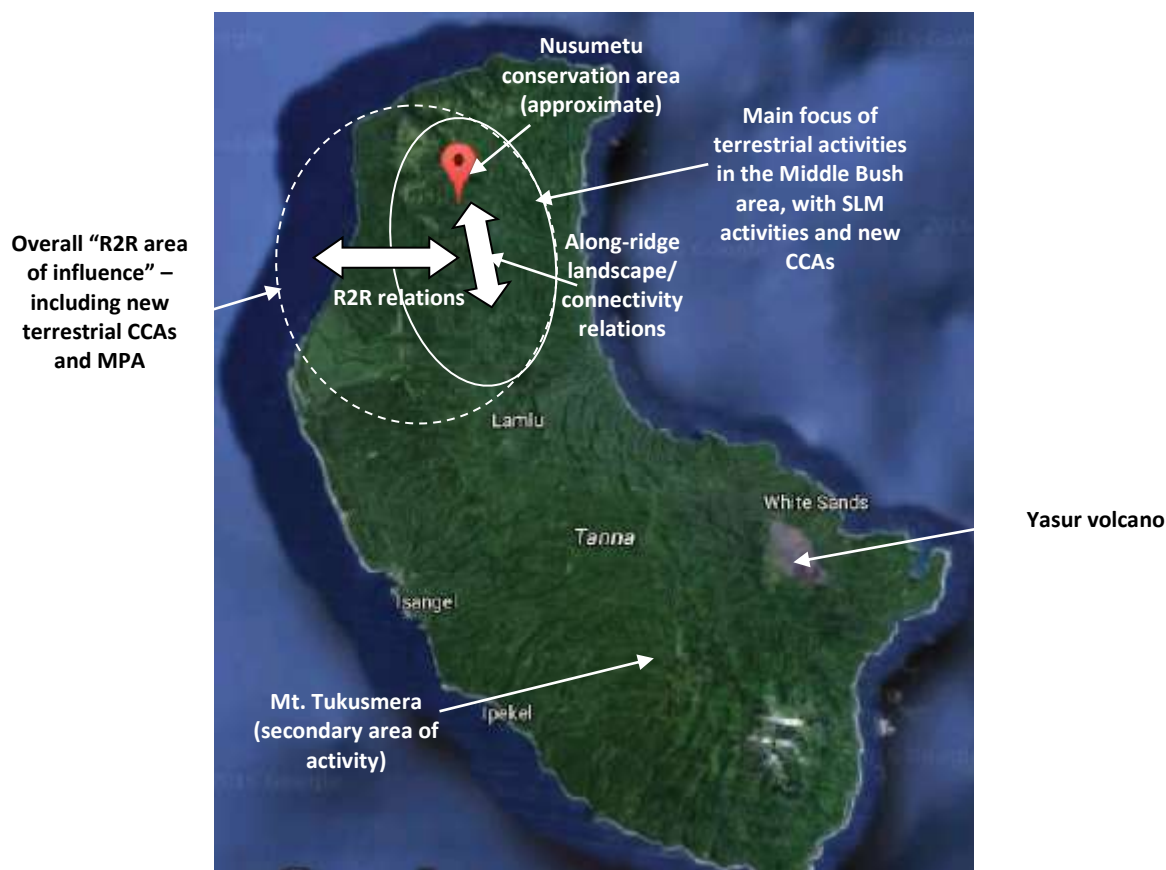
³⁹Benzie and Ballment, 1995

⁴⁰Lebot, V. and Cabalion, P. (1988) Kavas of Vanuatu. Cultivars of *Piper methysticum* Forst. South Pacific Commission. Noumea.

⁴¹ Vanuatu MSP 2004- Vanuatu Environment Unit

cultivated in the area since the mid-19th century, and it was promoted again in the 1980s through the Tanna Coffee Development Company (TCDC), which combined a large-scale plantation and a smallholder programme.

Figure 10. Middle Bush target locality, Tanna



Nusumetu conservation area

125. Nusumetu is one of four Community Conservation Area (CCA) initiatives on Tanna to date: the others are Keasi forest reserve, established in the 1990s with the objective of total protection; Tipineme forest conservation area, established in 2007 as a managed resource area; and Loanamilo conservation area, established in 2006 with the objective of strict protection.

126. Nusumetu is located in one of the areas of North Tanna with some of the best remnant forests, including stands of *Caryota macrospermum*, *C. ophiopellis* and *Schefflera tannaensis*. The landholders and chiefs in this area have demonstrated enthusiasm for conservation efforts which also encourage the natural regrowth of the two endemic palm species.

127. Nusumetu is a sacred site, with many big rocks on its southern hill side that were regarded as spirits acting as a barrier to people entering the area, making the area a 'tabu' conservation area. This ancestral custom is supported by later generations, who consider the 'tabu' site a conservation area. Later in 2006, the Landholders Conservation Initiatives Project (LCIP) hosted by the Department of Environmental Protection and Conservation worked with the communities for four years and strengthened the initiative. LCIP support has increased the resources in the CCA. Five tribes at Green Hill worked together to protect

the area. Green Hill also has a botanical garden where the LCIP project provided required management assistance.

128. Since the LCIP project, area has received no external support, but it is still respected. The community members consulted during the PPG phase expressed the need for support to the initiative through capacity building activities for management of the community conservation area. The activities suggested were: i) biodiversity conservation and environmental management, ii) constitution of a management committee for effective functioning and enforcement of the CCA management rules; iii) training for the management committee on roles and responsibilities; and iv) realisation of a survey of the CCA and demarcation of its boundary. The community also expressed their concern on the need to legally register the area through legislation. A draft management plan exists but needs further review and finalisation.

129. There is a possibility of extending the CCA to cover a marine conservation area, as the same five tribes own the land from Nusumetu conservation area right down to the sea.

1.2.2.3 North Efate

Overall characteristics of Efate

130. Efate forms part of the country's central volcanic chain of islands, and belongs to SHEFA province, which also includes Epi and the Shepherd Islands (Tongoa, Emae, Makira, Tongariki, Buniga and Mataso). SHEFA has a total area of 1,455km²: Efate has an area of 899.5km² and a population in 2009 of 68,829, of which 44,040 lived in the national capital Port Vila. The majority of commerce and tourism activities take place here. The island has fast flowing rivers, cascading waterfalls and isolated sandy beaches and lagoons. There are nineteen rivers and streams on the island, the largest of which is Epule at northeast Efate, while the rest are relatively small.



Vegetation of Efate

131. The coastal area of much of the island is degraded as a result of gardening and other developmental activities, which are slowly encroaching into the Island's interior forests. The major remnant forest of Efate is found in the northern and central areas of the Island.

132. The drier western side of the island from, sea level to 1000m, is "mid height forest with emergents"⁴². The dominant tree species found in this forest type are *Dysoxylum confertiflorum*, *Myristica fatua*, *Syzygium spp.*, *Buchanania macrocarpa*, *Calophyllum neo-eudicum*, *Hernandia moerenhoutiana*, *Elaeocarpus angustifolia*, *Syzygium nutans*, *Burckilla obovata*, *Pterocarpus indicus*, *Terminalia catappa*, *Endospermum medullosum*, *Canarium indicum* and *Ficus spp.*

133. Mid-height forests with small to medium-diameter crowns below 300m altitude, having more or less canopy cover with *Ficus spp.*, are commonly dominated by *Antiaris toxicaria* and *Endospermum medullosum*. Other species recorded are *Pisonia umbellifera*, *Sterculia vitiense*, *Dendrocnide latifolia*, *Barringtonia edulis*, *Dysoxylum amoorides*, *Planchanella linggensis*, *Mangifera minor*, *Gyrocarpus americanus*, *Pometia pinnata*, *Bischofia javanica*, *Terminalia catappa*, *Pangium edule*, *Euodia bonwickii*, *Canarium indicum*, *Chissocheton spp.*, *Syzygium nutans*, *Dillenia ingens*, *Calophyllum neo-eudicum*, *Hernandia moerenhoutiana*, *Pterocarpus indicus*, *Spondias dulcis* and *Myristica fatua*.

134. Mid height forests with an open canopy type have the same species mentioned in the mid-height forests, with small to medium-diameter crowns, but also commonly include patches of *Castanospermum australe*. Other recorded species found are *Inocarpus fagifenus*, *Bischofia javanica*, *Artocarpus communis*, *Cryptocaria spp* and *Melanostachys falcata*.

135. Some lowland forest areas have been converted to forest plantations in the early 1980's using *Cordia alliodora*, that were established through Local Supply Plantation arrangement with landowners of Mangaliliu village, northwest Efate. The Department of Forests has established many of Small-Holder Farmer and Community Based Forestry Plantations and Woodlots with local farmers around the island using five national priority species of Sandalwood (*Santalum austrocaledonicum*), Whitewood (*Endospermum medullosum*), Mahogany (*Switenia macrophyllia*), Nangai (*Canarium indicum*), Natapoa (*Terminalia catappa*). Some of the small-holder farmers and community based forestry plantations are within the proposed project site.

136. Mangrove ecosystems are found from Eratap village south of Efate, Tanoliu, Moso Island, Malatia, Emua, Panagisu up to Takara hot spring at north of Efate. Eratap village on Efate has 31ha while the rest of mangrove areas around Efate are not yet known.

Biodiversity of Efate

137. Due to the young geological age of Efate, its biodiversity is not as diverse as the older islands of the Western Belt and the Eastern Ridge, though a significant number of endemic and restricted range species do exist. The Island contains a Key Biodiversity Area (KBA), which ranges from the northern part of the island starting from Takara hot springs with mangrove ecosystems right through to Lelepa Island on the northwest.

138. Efate has a reported 51 bird species out of the total of 122 species reported nationwide⁴³. This is the second highest bird count of all islands after Santo, with

⁴² VANRIS

⁴³Bregulla.H.L.1992.Birds of Vanuatu. Anthony Nelson, Oswestry.

significantly more species recorded than on nearby islands of similar size and habitat diversity⁴⁴, which may be due to inaccessibility to other islands. Seven endemic birds are found on Efate such as the moderately common Vanuatu Flycatcher (*Neolalage banksiana*); the Incubator bird (*Megapodius freycinet Layardi*), which is found in lowland forest but can also be found at moderate altitudes; the Vanuatu White-eye (*Zosterops flavifrons*), and the rare and endangered Royal Parrot finch (*Erythrura cyanovirens regia*). This bird is rarely encountered on Efate and its number must have been decreased due to various development activities and increase in human population that affects their habitats. This bird species is generally confined to the highlands and mountains and rarely descends to lowlands. It inhabits the wooded forest with fig trees as they feed on the fig fruits.

139. *Megapodius freycinet layardi* is still common in suitable habitats on Efate, but its nesting sites are threatened due to agricultural and other developmental activities. Port Havannah communities on north Efate frequently harvest its eggs for protein. A concern from this village indicated that the population of this species and the Red Jungle Fowl, *Gallus gallus* which, they also hunt for food has decreased over the last decade due to increase of human population compare to the past.

140. Three of the country's four species of fruit bat are found on Efate. Of these, the Fijian Blossom-bat (*Notopteris macdonaldi*) is a primitive species found in Fiji and Vanuatu only, and in Vanuatu is limited to six islands; the other two species are the endemic Vanuatu Flying fox, *Pteropus anetianus* and the common Pacific Flying fox, *Pteropus tonganus*.

141. Reptiles include *Gehyra vorax*, the second largest gecko in the Pacific, which is confined to the canopy of primary forest trees: it lives in sympatry with *G. oceanica* but on trees it normally occupies higher up towards the canopy. It is less common in disturbed habitats than in humid forests. *Lepidodactylus lugubris* is found in low elevation forests, cultivated areas, villages and towns, while the endemic *L. vanuatuensis* is commonly found in villages and in areas close to sea shores. *Nactus multicaudatus* is also found. *Emoia atrocostata freycineti* also occurs on Efate and mainly lives on rocky beach margins where its density is high: other common Scincidae species include *E. caeruleocauda*, *E. impar*, *E. cynura*, *E. cyanogaster*, *E. nigromarginata* and the endemic *E. sanfordi*. The boa *Candoia bibroni* occupies most forest areas, as well as cultivated areas highly modified by human interventions, and the semi-arboreal *C. carinata* is also commonly found. The introduced IUCN Endangered Fijian iguana, *Brachylopus fasciatus* is now naturalized on the island, and has spread from Kleim's Hill-Melema area to other sites on Efate following its release in the 1960s to 1980s.

142. Thirty freshwater fish species (24 fish, 2 *Microphis* and 4 eel fishes) and 16 crustaceans (7 prawns, 7 shrimps and 2 crabs) have been found in five surveyed rivers on the island⁴⁵. No endemic crustaceans have been reported, but six endemic fishes of Gobiidae family are present on Efate, namely *Schismatogobius vanuatuensis*, *Sicyopterus aiensis*, *Stenogobius yatei*, *Stiphodon astilbos*, *S. mele*, and *S. sapphirinus*. These fish species prefer living in clean, running and well oxygenated water bodies. Part of their life cycle during the larvae stage is in the sea which means that any infrastructures build over the water course should be constructed in a way that allow migration of these species to and from the sea.

⁴⁴ Vanuatu Updated Biodiversity Literature Review, 2011. Unpublished.

⁴⁵ Keith P., Marquet G., Lord C., Kalfatak D and Vigneux E. 2010. Vanuatu Freshwater Fish and Crustaceans.

143. The CITES-listed coconut crab (*Birgus latro*) is commonly found on Efate including its offshore islands. It has been heavily harvested for food and sale at Port Vila market, which has led to declines in its populations. The Department of Fisheries has regulated the harvesting of this species under its size limit and quota system, although undersized individuals are still occasionally sold at Port Vila market.

144. Endemic plant species on the island include *Tarrena efatensis*, *Cyrtandra efatensis*, *Alyxia efatensis* and *Gouania efatensis*. The endemic palm species *Metroxylon warburgii*, *Calamus vanuatuensis*, *Velitchia arecina* and *Galubria cylindrocarpa* are also found.

Resource use

145. Women of the villages consulted during the project preparation, spend most of their time doing gardening and selling their produce at Port Vila market every week. They collect *Leucaena leucocephala* and other species for firewood. Men work with them to harvest *Acacia spiropis* and *Leucaena leucophala* for making charcoal that is used for cooking and also sold at Port Vila market. They also collect herbal medicinal plants within the coastal and nearby secondary forest areas for treating illness. Other activities that they occasionally involve in are harvesting of freshwater fish, prawns and eel fishes as well as fishing in the sea, collecting bivalve species and reef gleaning. As a result they have little knowledge of their wild forest resources. Women's perspective about biodiversity, wild resources and forest is that they are still intact and abundant but the youth and school children raised concern that resources are declining and their forest is degrading.

Conservation initiatives to date

146. This area also covers a number of coastal conservation initiatives by local communities known as the Takara marine conservation area, Nguna-Pele MPA, Malavau Terrestrial Tabu Area, Port Havannah Conservation Area, Tanoliu conservation area which includes the turtle tagging project, Lelepa Island Tours Marine Protected Area, and the JICA Grace of the Sea Project hosted by the Department of Fisheries.

147. At Port Havannah, community chiefs and other village leaders have established a *tabu* (prohibited) zone in their coastal area, including mangroves, aimed at maintaining flows of goods and services, particularly food, but without specific attention to biodiversity considerations.

148. There exists a resource monitor network on the island, known as Tasi Vanua Resource Monitors Network: the area covered by the network stretches from Pangpang village on the eastern side of the island, including all the northern villages, right through to Mangaliliu village on the north-western side. Consultation with the Chairman for the Tasi Vanua Resource Monitors network indicated some conservation and rehabilitation activities which the network is assisting the communities, such as assessment of activities that involve harvesting of resources and stock assessment of resources within the Port Havannah mangroves. Malapoa college students also assisted the resource monitors carrying out reef check at Port Havannah area. The resource monitors carried out awareness base on the results of their assessments and asked the landowners and community members to have the area under conservation.

149. Efate Tasi Vanua resource monitors network also assisted communities planting mangroves in affected coastal areas especially Tanoliu and Ulei at north Efate, in association with Malapoa College, Ulei secondary and Tanoliu primary schools. Another rehabilitation activity is the use of old vehicle tyres built along Tanoliu coastline. A mangrove replanting

initiative was carried out by MESCAL project and Department of Forests with communities of Epau on the eastern side of Efate as well as private property at Nambatu Lagoon in Port Vila.

Efate Land Management Area (ELMA)

150. Efate Land Management Area (ELMA), formerly known as the Efate Reserve Park, is an initiative organized by the Efate Vaturisu Council of Chiefs (EVCC) to protect the natural, cultural and historical resources of Efate for future generations. The initiative is located in the central interior bush of Efate and covers approximately 19% of the island. It also includes the highest point within Efate, Mt McDonald (627m). It was first introduced in 1993 with funding support from Australia and New Zealand governments, and is supported by the national government and SHEFA province. ELMA is managed by a committee comprising the relevant government sectors, Vanuatu Culture Centre, SHEFA province and Vaturisu council of chiefs. The council of ministers recognized ELMA and its management committee in 2006, giving the right to ELMA committee to act as its consultancy body to seek funding to implement ELMA's activities. All surrounding villages were consulted and the majority of the villages have provided verbal support for its establishment. Two last villages of Pangpang and Epule are yet to provide their support.

151. In 2013, the ELMA initiative was further advanced with funding from the Australian government, including the review of its existing bylaw and the recommendation of its legal establishment through the Environmental Protection and Conservation Act (Part 4: Division 2: Community Conservation Areas). Through this process, a draft management plan is currently in place, but it still requires consultations from relevant government departments, NGOs, private sector and community consultations prior to its finalization. Further steps that are required include the raising of awareness of the management plan, obtaining supporting letters from six important stakeholders, printing of management plans and to carry out its formal launching.

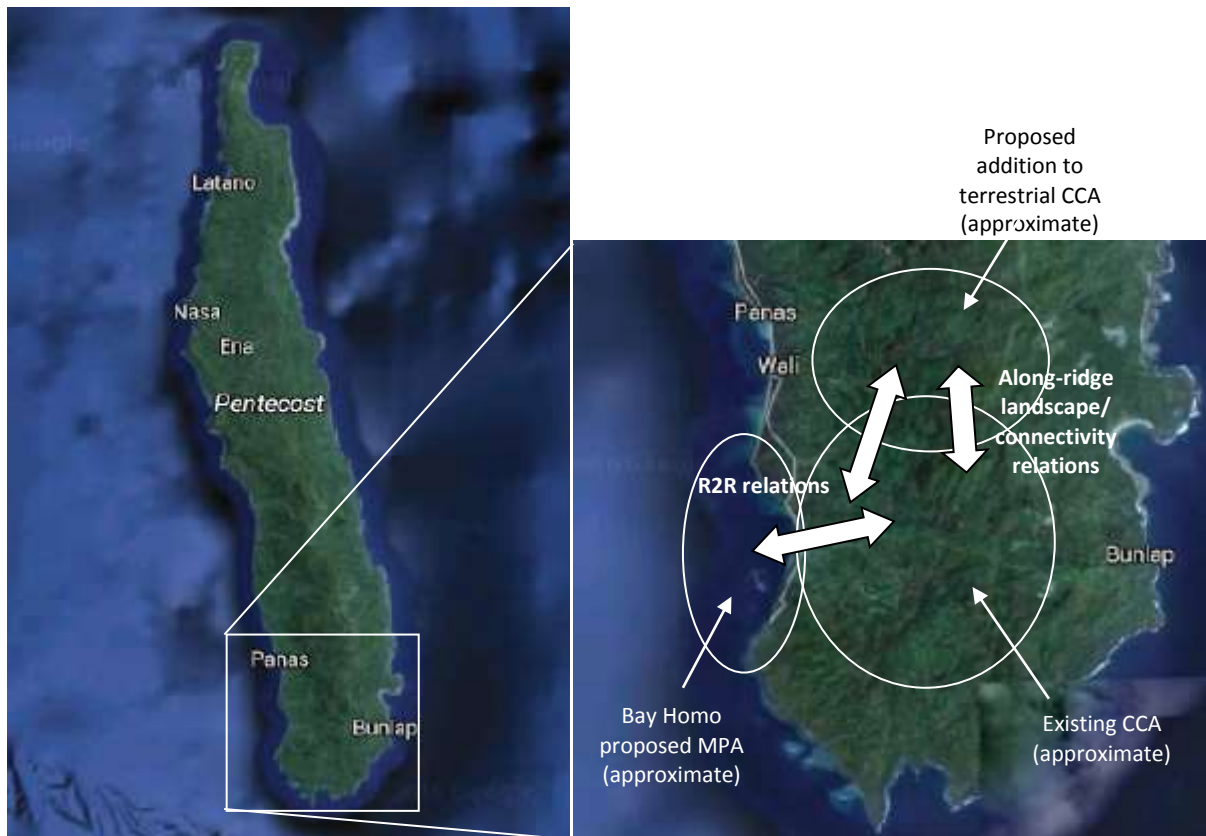
1.2.2.4 South Pentecost

Overall characteristics

152. Pentecost belongs to Penama Province in the centre-north of Vanuatu. It is a mountainous island which stretches north to south over some 60km. It has an area of 490 km². The mountain range, of which the highest is Mount Vulmat (947 metres (3,107 ft)), marks the dividing line between the humid, rainy eastern coast and the more temperate western coast. It has a number of coastal plains, cross-cut by small torrents.

153. The island had a population of almost 17,000 in 2009 census. Its population centres are concentrated along the west coast, although a number of people also live inland. Most of the villages have telephones and a few have small banks and post offices. The east coast is wild and inaccessible, with relatively few inhabitants, although people are moving into previously uninhabited areas as the island's population increases.

Figure 11. South Pentecost target locality



Vegetation

154. The following vegetation categories have been identified in South Pentecost: Vt_1. Lowland rain forest, Vt_1a. High stature forests on volcanics (basalt), Vt_1b. Medium stature forest heavily covered with lianas, Vt_1c. Regrowth forest as low scrub densely covered with lianas, Vt_1d. Alluvial and floodbench forests, Vt_2. Montane cloud forest and related vegetation, Vt_3. Coastal vegetation (including Pandan dominated) and Vt_4. Secondary and cultivated wood and other vegetation.

1.2.2.5 Gaua

155. Gaua is the largest and second most populous of the Banks Islands in Torba Province of northern Vanuatu. It covers 342 km² and in 2009 had a population of 2,491. It has rugged terrain, reaching up to Mount Gharat (797m), the peak of the active stratovolcano at the centre of the island, which last erupted in 2013. The volcano has a 6 x 9 km caldera, within which lies a crater lake known as Lake Letas, which is the largest lake in Vanuatu.

Figure 12. Gaua target locality

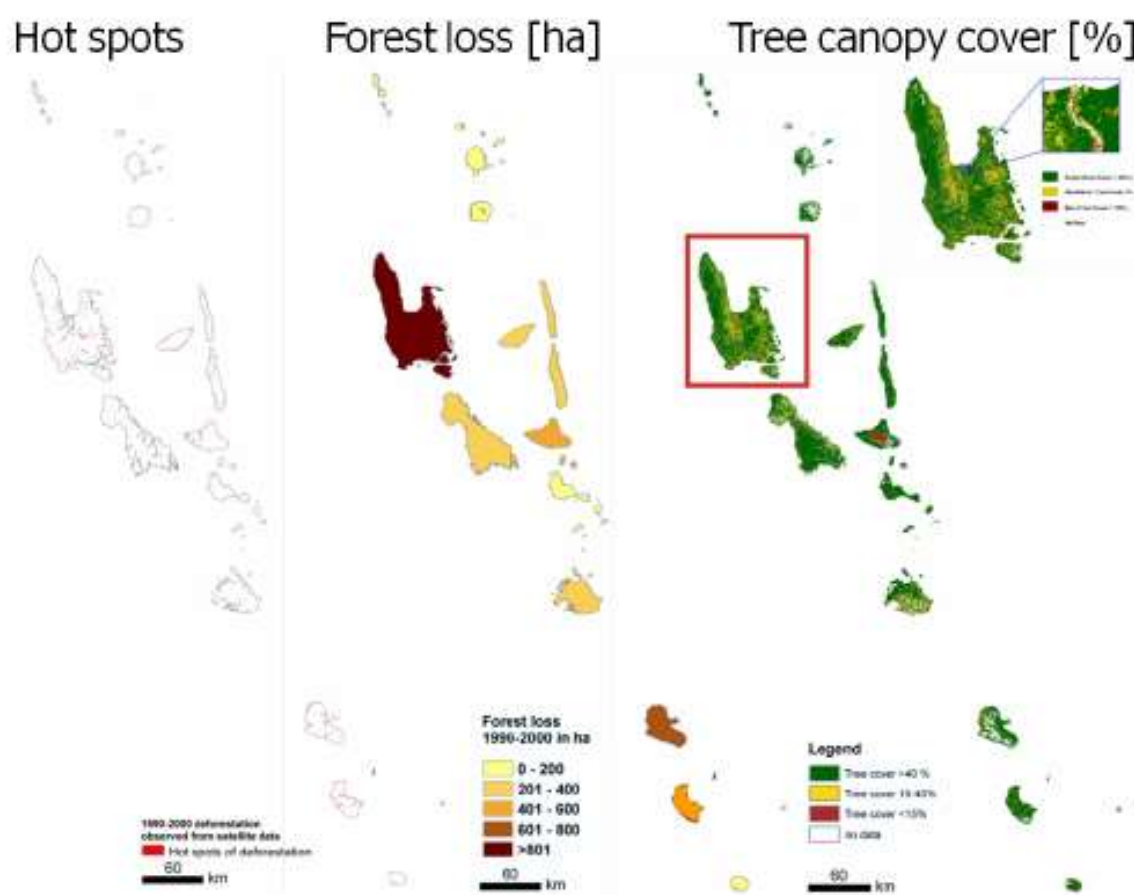


1.3 THE CURRENT SITUATION

1.3.1 Main environmental threats

156. Natural resources and biodiversity face a number of threats, the magnitude of which is related to a combination of demographic growth, pressures for economic development, and changes in natural resource management models. Figure 13 shows historical rates of deforestation between 1990 and 2000, and resulting forest cover; these patterns may have varied since the date of that assessment as a result of the suspension of logging concessions on the one hand, and the emergence of other threats such as agricultural expansion on the other (see below).

Figure 13. Results from the 1990-2000 gross deforestation assessment and forest cover mapping exercise completed for Vanuatu⁴⁶



Expansion of cattle ranching

157. The national cattle herd increased by around 15% between 1999 and 2009, from around 151,000 to 174,000, with an increase of more than 11% between 2008 and 2009 alone; currently the herd is estimated at around 200,000 head. The Livestock Sector Policy for 2016-2030 is currently in its final draft form: Department of Livestock representatives indicate that the policy will promote a major increase in the national cattle herd, from the current level of 200,000 to a target of 500,000 by 2025, in recognition of its potential to contribute to farmers' incomes, associated rural businesses, and import substitution. This

⁴⁶ http://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Vanuatu_R-PIN_07-30-08.pdf

promotion will be aimed principally at small scale livestock farmers, in order to benefit preferentially the native Ni-Vanuatu. This expansion will be accompanied by investments in genetic improvement of the herd, in order to increase productivity.

158. While there are no reliable figures on the proportion of the current pasture area in the country that is managed by Ni-Vanuatu and so will be targeted through this initiative, and there is not necessarily a direct correlation between herd size and pasture area, if achieved this targeted 250% increase in herd size threatens to pose a significant threat to vegetation resources and associated biodiversity in many areas of the country. This will occur as the result in the increasing conversion of lands that are currently under forest, or used for cyclical fallow-rotation agriculture, to permanent pasture: those who already have enclosed pastures will increase their area, and others who currently have fewer animals are expected to move from their current practice of grazing tethered animals as part of traditional cyclical farm systems, to starting to enclose pastures.

159. The livestock sector has historically been dominated by a limited number of large scale ranchers, including many expatriates, who enjoy high levels of economic and political power. These ranchers operate on lands leased from customary landowners, including both long-standing (pre-Independence) estates which also typically feature large areas of over-mature coconut plantations, and newly cleared lands in the interior of islands such as Efate, where they are motivated not only by the profitability of the activity but also by objectives of territorial control.

Expansion of tourism activities

160. As shown in Figure 5, Vanuatu has experienced a very large growth in the tourism sector in recent years. Cruise ship visits account for a large proportion of this activity: while these are concentrated on a small number of localities, they can have significant environmental impacts in those localities. "Mystery Island" on the south coast of the project's target island of Aneityum, for example, receives around 100 cruise ship calls per year: with most ships now operating at 2,000+ capacity, this potentially equates to up to 200,000 visitors per year. This places severe pressures on natural resources, through the extraction of non-timber forest products for the production of handicrafts for sale, and the overexploitation of marine resources (particularly lobsters), again for sale to cruise ship visitors (lobsters are also sold on order to buyers in Efate, a trade which again is largely a function of the levels of tourism activity there). Cruise ship tourism also has significant social impacts: cruise ships have on occasions arrived at Mystery Island over the Christmas period, leading local people to abandon their culturally-important Christmas celebrations to sell products to the tourists.

161. At the same time, the tourism boom has led to a large growth in hotel and restaurant development in coastal areas, including the establishment of a number of coastal real estate subdivisions in the north Efate target locality. While in general waste emissions from these developments are adequately managed, these developments risk displacing natural ecosystems, disturbing coastal wildlife and placing additional extractive pressures on local resources.

Unsustainable farming practices

162. Traditional family-based subsistence "gardens" over most of Vanuatu typically contain a wide range of crops, including rootcrops such as taro, yams, cassava and sweet potato, as well as island cabbage (*Abelmosihos manihot*), tomatoes, bananas, plantains and coconuts. In these gardens, trees are often integrated with the crops in spatial or successional

traditional agroforestry systems: spatial systems may involve the maintenance or planting of trees around plot boundaries, and sequential systems may involve cropping periods being followed by fallows of naturally regenerated secondary vegetation featuring rapid growing pioneers such as *Trema orientalis* and *Alphitonia zizphoides*⁴⁷, which allow soil fertility to recover and also yield useful tree products. Under conditions of low and evenly dispersed populations, these traditional cyclical farming systems can be highly sustainable. This sustainability has, however, been undermined in many cases by the growth and concentration of population (due in part to the influence of European administrators and missionaries in colonial times), and an increased emphasis on enclosed grazing (see above) and cash crop production..

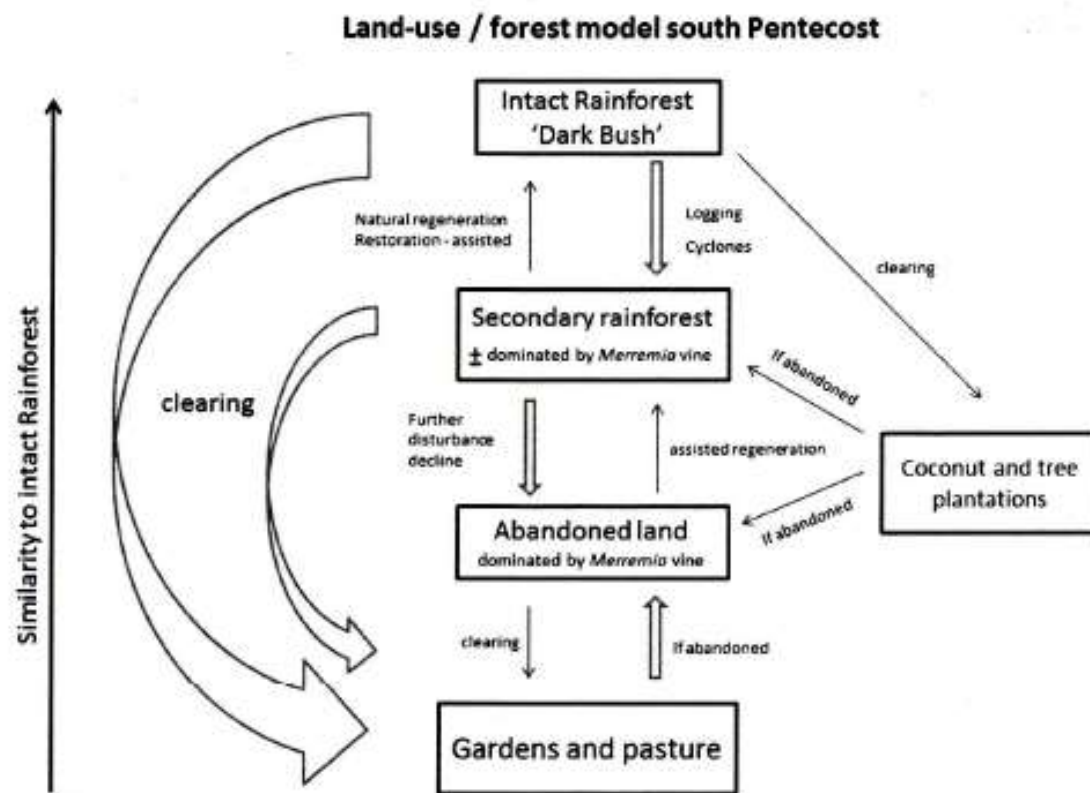
163. Population growth is now resulting in agricultural activity spreading back into the interiors of some islands. On Efate, a major driver is immigration of settlers from other islands who occupy lands illegally and are slowly moving into the interior of the island without the consent of the land owners. Community consultations on Efate, as part of the project formulation process, revealed the concerns of community regarding the decreasing population levels of local biodiversity such as flying fox, wild fowl, and Incubator bird, Pacific imperial pigeon, Vanuatu fruit dove and Red-bellied fruit dove.

164. On the target island of Pentecost, a significant additional driver of advance of the agricultural frontier is the growing market for *kava*. This expansion is accompanied by clearance of the forest in the islands' interiors, resulting in the loss of its biodiversity and carbon stocks. Forest clearance typically also leads to explosive growth of the vine *Merremia peltata* (big leaf rope): this highly invasive pioneer, which is a major problem over much of the country, inhibits the recovery of vegetation under cyclical fallow systems, and also requires very high levels of investment in labour for weeding, undermining the viability and sustainability of agricultural systems. A botanical survey of the target area found little evidence of crop rotation or 'rotational' use of previously cleared land, with much of the land left unproductive and dominated by *M. peltata*; the rationale for ongoing clearing and burning of forest, as explained by local people, was to avoid the problems of pests in food crops and to maximise the productivity of yam and kava. More intensively managed gardens and water taro terraces were found in areas closer to villages. The relationships between disturbed forest areas and high forest ("dark bush") and the potential regeneration pathways, including both natural and human-assisted trajectories, are shown in Figure 14⁴⁸.

⁴⁷ Barrance A.J. (1995): Traditional knowledge as a basis for village forestry in Vanuatu. *Commonwealth Forestry Review* **74**(2).

⁴⁸ Rapid Botanical Assessment of Bay Homo Community Conservation Area, South Pentecost Island, Vanuatu. Kooyman R., Ala, P., Chanel, S., Dunphy, M (2015). FAO/GEF/PAS/FPAM.

Figure 14. Schematic of land-use model for South Pentecost, showing relationship of disturbed areas to intact forest (Dark Bush) and directional pathways to either increasing or decreasing similarity to Dark Bush⁴⁹.



165. On Pentecost, another implication of the expansion of agriculture (particularly for *kava* production) into forests is a reduction in local people's access to forest products: of particular significance is the reduced availability of the vine (*Entada phaseoloides*) which is used for the *nagol* land dive, which is of great cultural significance to the people in the south of the island and also is a very important source of tourism income, particularly through cruise ship visits.

166. Land degradation problems associated with agricultural activities cannot exclusively be attributed to the direct or indirect effects of European contact and economic development. On Aneityum in particular, historical accounts refer to the middle-altitude areas of the island already having significant erosion at the time of European contact, due to a combination of repeated burning for agricultural clearance (agriculture was initially concentrated on the hillsides in part due to the swampiness of the coastal areas), and the impacts of repeated cyclones (between 1848 and 1918 at least 33 cyclones affected the island). Deposition of the products of erosion created extensive alluvial plains at the mouths and along the valleys of the three main rivers of the island⁵⁰, and has also resulted in the choking of extensive areas of the island's coral reef.

167. Tanna has a relatively low population growth rate (11% between 1999 and 2009, compared to 25% nationwide) but a relatively high and evenly distributed population

⁴⁹ Kooyman et al, 2015

⁵⁰ Spriggs (1986): Landscape, land use and political transformation in Southern Melanesia. In: Island Societies: Archaeological Approaches to Evolution and Transformation. Cambridge University Press.

density, at 52 people/km² in 2009⁵¹, which means that agricultural pressures threaten to affect areas of high biodiversity even in the middle of the island, including the forests of Nutumesu in the project's target area of Middle Bush. As on many other islands, this agricultural pressure is compounded by the expansion of enclosed pasture, which either directly substitutes forest or pushes agriculture into forest areas. The soils on Tanna are highly fertile due to constant deposition of volcanic ash, but at the same time highly friable and susceptible to rain erosion.

Exploitation of marine resources

168. Many of the inshore fishery resources in Vanuatu, especially those close to the urban markets, appear to be fully or over-exploited⁵².

169. The reef fishery has been the main source of fish protein on the subsistence level. Up to the late 1980s and early 1990s fishing in the reef zones in Vanuatu was still generally steeped in tradition, using age-old ways and means of fishing and generally limited to the shallower areas of coastline, the intertidal zones and infratidal zones, less than 10m. deep, and to the coastal zones sheltered from the swell. Fishing boats used in these zones were mostly traditional canoes with paddles. The reef flats were easily reached on foot. The collection of mollusc was normally done by the women. Fishing methods used included; assegai or spears, bows and arrows, cast nets, fish fences and traps, fishing reel, gill nets, handlines, poisoning using leaves and under-water spearguns. During the mid-1990s there was a dramatic change in rural fishing methods. There were more boats powered by either 15 or 25 Hp outboard motors. Preferred fishing methods included; cast nets, gill nets, under-water spear guns, fishing reels, and handlines. Fin-fish catches from the reefs became a common commodity in the fish markets. Fin fish which used to be caught for mainly subsistence are now caught for commercial purposes. This change is driven the cost of living and the need to generate rural income to cover such costs as school fees, school uniforms, etc.

170. Examination of catch data for the 1982–1988 period for catch and effort analysis for the fishery and length frequency analysis on the four most commonly caught deep-water snapper species, *Etelis carbunculus*, *E. coruscans*, *E. radiatus* and *Lutjanus malabaricus* appeared to be consistent with the conclusion that stocks were at that time underexploited⁵³; and indications by 2007 were that the current level of exploitation had not by that date reached the estimated maximum sustainable yield of about 730 t/year. However the current decreasing trend in the number of boats engaged in bottom fishing is a possible indication of the likely increased pressure on the inshore resources⁵⁴.

171. All of the catch from this bottom fishery is marketed locally via several avenues. The Provincial Fisheries Extension Centres in the outer islands, the Santo fish market, Au Bon Marche in Port Vila, and the LTP fish market in Port Vila are the main marketing channels of

⁵¹Of the four target islands, only Efate is higher, at 73 people/km², but when the population of the capital Port Vila is removed from the calculation this falls to less than 30 people/km²

⁵² <http://www.fao.org/fishery/facp/VUT/en#CountrySector-StatusTrends>

⁵³ Carlot A.H. and Nguyen F. 1989. Preliminary study on population dynamics of Vanuatu deep bottom fish after seven years of exploitation. Tropical Fisheries Resource Assessment Workshop, Honolulu, Hawaii, July 5–26, 1989.

⁵⁴Moses John Amos: Vanuatu fishery resource profiles. IWP-Pacific Technical Report (International Waters Project) no.49. SPREP, 2007.

fisheries products. However, direct sales to restaurants and stores, especially those in Port Vila, are increasing due to better prices offered to fishermen⁵⁵.

172. The Vanuatu Fisheries Resource Assessment in 2007 assessed stock status of key fisheries target species as follows:

- Coconut crab (*Birgus latro*): the expanding tourist industry and the decline in local copra-based economies has resulted in a significant increase in the socioeconomic value of the coconut crab, which in turn has led to an increase in exploitative pressures on local coconut crab populations. Substantial reductions in population sizes have been noted.
- Rock lobster (*Panulirus pencillatus*, *P. versicolor* and *P. longipes femoristriga*): assessment surveys carried out by the Department of Fisheries indicate that rock lobster stocks in Vanuatu are in danger of being overfished. The exploitation level is determined by access to urban markets in Port Vila and Luganville, and the population size of the island or coastal communities. The assessment surveys concluded that Erromango, Aneityum, and the islands of the Torres/Banks group had very high numbers of rock lobsters; tourist activity at Mystery Island, Aneityum, has however grown greatly since then.
- The overall status of sea slug stocks in Vanuatu was at a very critical stage, whereby, sustained fishing pressure can result in depletion of the stocks. Fishing pressure is a direct result of monetary needs of rural communities throughout Vanuatu.

173. In 1990 notes that there was no strong evidence of significant human-induced disturbance of fish communities on study reefs within Vanuatu. However, some reef disturbances were apparent as a result of cyclones and crown-of-thorns starfish infestations, as well as the cutting of mangroves and siltation from soil erosion (from logging operations).

Damage to reefs by cyclones and invasive species⁵⁶

174. In 1990, Vanuatu's reefs were reported to include pristine areas with no evidence of recent physical damage, and other areas where there had been considerable death and injury to corals from cyclones, sea level changes, and crown-of-thorns starfish. Outstanding coral reefs were observed on the east side of Inyeug on Aneityum, on the west side of Cook Reef, the entrance to Hog Harbour on Lathu Island, the reef slopes adjacent to the western bay on Reef Island, and on Ureparapara. Although the status of reefs in Vanuatu was listed as "good" by Dahl (1985, in Done and Navin 1990), they were assessed as "poor" in 1988, even with the exceptions of some areas as stated above. It was suggested that considerable degradation had taken place since 1985, mainly from cyclones and crown-of-thorns starfish.

175. Monitoring results from 1998 on show that the main causes of stress to corals in Vanuatu are from natural disasters (e.g. bleaching, cyclone damage, and crown-of-thorns, *Acanthaster planci*, predation). The bleaching in 2000/2001 caused coral deaths around west Efate from Port Vila Harbour, Mele Bay and Erakor Island. Coral bleaching was observed at all monitoring sites.

176. Cyclones have also significantly damaged corals in Vanuatu. Cyclone Danny in 2003 damaged 80% of live corals on exposed reefs on southwest Efate from Malapoa, Devils

⁵⁵ Moses John Amos (idem).

⁵⁶ Done T.J. and Navin K.F. (eds). Vanuatu marine resources: Report of a biological survey. Australian Institute of Marine Science, Townsville, Australia.

Point, Pango, Hat Island and Lelepa. Floods (rivers and streams) caused by cyclone Danny also brought considerable amounts of silt and mud onto the coastal waters causing high mortality of corals. Earthquakes also contribute to coral deaths in Vanuatu. In 1999, the northern part of Ambrym Island was forced upward by an earthquake. This resulted in a 10 m tsunami that hit south Pentecost (killing 11 people, injuring 50, and displacing over 100 others) and caused severe damage to coral reefs.

1.3.2 Baseline initiatives

177. Land registration and land-use planning: MLNR, supported by the Mama Graon Project, are working to strengthen land registration, reduce conflicts over land-use and improve land-use planning. These activities are mostly implemented at the national level and are improving the overall framework for land-use in Vanuatu. These include the development of rural land-use planning guidelines.

178. Agriculture, livestock and forestry extension (including reforestation): MAQFF, supported by FAO, are supporting reforestation and improved forest management for ecosystem restoration and the provision of forest products, mostly for local use. The Department of Forestry is placing a strong emphasis on smallholder plantings of valuable species such as whitewood (*Endospermum medullosum*) and sandalwood. Agricultural extension initiatives on the part of Government and NGOs focus on improving production practices, value-addition and marketing, within the context of the Agricultural Policy which focuses on the development of a number of key cash crops. They are also working on research into crops to promote food security and reduce vulnerability to climate change. The National Livestock Programme is promoting the expansion of the national cattle herd throughout the country, especially at smallholder level, including the improvement of genetic stock and management practices aimed at increasing productivity.

179. Fisheries: the Village Fisheries Development Programme of the Department of Fisheries is mainly focused on offshore bottom fishing. The project was estimated to have met 80% of local requirements for fresh, high quality fish for urban populations; therefore, it has been successful in significantly reducing the amount of imported fish. The Department of Fisheries has recently been deploying fish aggregating devices (FADs) to communities, including those with community conservation or tabu areas, in order to relieve pressure on coastal fisheries. The Department of Fisheries will soon implement a SPC and ADB Coral Triangle Initiative (CTI) FAD project in 2016.

180. JICA has also invested significantly in fisheries development and management in Vanuatu. The Grace of the Sea Project for Coastal Villages in Vanuatu has focused on Community Based Coastal Resource Management in 3 pilot sites.

181. Protected area management: MLNR and MAQFF, supported by Vango, help local communities to create and manage terrestrial conservation areas (Community Conservation Areas or CCAs) and Marine Protected Areas (MPAs). This includes registering and formalising the areas, and providing technical assistance. Awareness raising activities carried out by MLNR and MAQFF have also focused on raising awareness on the environmental issues and its drivers in the locales.

182. In managing existing PAs; MLNR and MAQFF have invested in monitoring the effectiveness of these areas (and the results and lessons learnt from the monitoring of existing PAs will feed in to output 1.1) and small-scale interventions such as the provision of

Fish Aggregating Devices or FADs (enabling people to fish out at sea and preserve their reefs) and hatcheries to restock local fisheries.

183. Tourism development: the MTTCI is supporting tourism marketing and development, and is also promoting value-addition and marketing of local products, mostly food for sale to tourists.

184. Rural development: The Eleventh European Development Fund (EU EDF 11) runs from 2014-2020, with a focus on investments to support rural development, and a major emphasis on agriculture. Activities in this area include development of smallholder agriculture, strengthening of agricultural extension services and infrastructure improvements to facilitate inter-island trade.

185. Carbon monitoring, reporting and verification (MRV): MAQFF (Forestry Department), supported by FAO and others, are working on the development of MRV guidelines and a national framework for REDD+. The main support for this is likely to come from the World Bank Forest Carbon Partnership Facility (FCPF) and Vanuatu has recently submitted a Readiness Preparation Proposal (R-PP) for funding.

186. In addition to the above, the project will build upon other past and ongoing national initiatives, such as the GEF-funded Vanuatu Local Conservation Initiatives Project, the GEF-FAO Forestry and Protected Area Management Project and the Australian Centre for International Agricultural Research (ACIAR) protected areas project. It will also collaborate, where appropriate, with the two LDCF climate change adaptation projects in Vanuatu and the Secretariat of the Pacific Community (SPC)-GIZ Programme on Coping with Climate Change in the Pacific.

187. Non Wood Forest Products (NWFPs): MAQFF through its extension services provides support to local communities in improved management of NTFPs. MTTCI, promotes processing of NWFPs (with a focus on agro-processing) and manufacturing products from raw NWFP materials, this is carried out through capacity development and technical assistance, and creating market linkages. European Union, through its programme in Vanuatu, has invested in improving infrastructure for NWFP processing, especially in outer islands. For example, supplying processed canarium nuts to the bigger islands require meeting strict processing requirements like freezing all products within 24 hrs of processing.

1.3.3 Remaining barriers to address the environmental threats

National level barriers

Sector development policies undermine the protection of global environmental values and flows of ecosystem goods and services

188. Although a number of key policy instruments do make specific recognition of the need to ensure sustainability and protect environmental values, a significant limitation is the limited degree of harmonization between the policy priorities of different sectors. Of particular significance in this regard are the following sectors.

189. **Tourism**: the Vanuatu Strategic Tourism Action Plan (VSTAP) for 2014-2018 recognises the importance of cultural and environmental issues (see paragraph 91) and the need to deliver tourism benefits to the outer islands, but there is still a strong reliance on cruise ship tourism as the mainstay of the sector. The VSTAP proposes to review the National Cruise Tourism Action Plan to ensure that it addresses economic, social and environmental impacts

and risk management issues (Action 5.4); there is little specificity in this regard, however, and no other proposal of how to ensure the environmental sustainability of cruise or other forms of tourism, or to use these as vehicles for delivering positive environmental benefits. There are no specific mentions of ecotourism, or proposals for fostering its development and sustainability, despite the growing number of small tourism businesses that focus on this sub-sector.

190. **Agriculture:** similarly, the vision and goal of the Agriculture Sector Policy (2015-2030) make reference to the sustainable management of agricultural food and cash crops, and the contribution of this management to environmental and social services; while the policy directives and strategies include the appropriate allocation of land according to land use policies, as well as the mainstreaming of environmental considerations into agriculture practices and the incorporation of sustainable farming practices. The lack of an adequately integrated overall vision at policy level linking these different elements, however, means that in practice productive considerations can undermine provisions for environmental sustainability, as evidenced for example by the expansion of kava in South Pentecost.

191. **Livestock:** a similar situation applies in this sector: while emphasis is placed on accessing organic beef markets, the potential market benefits that these are likely to offer are unlikely to be matched by corresponding environmental benefits given that most of the sector is anyway by default organic, even if not certified as such; at the same time, the sector policy of expanding and improving the cattle herd (from 200,000 to 500,000) goal threatens to generate major impacts on vegetation resources due to the corresponding expansion of fenced pastures.

Decision-making and planning mechanisms do not allow complex environmental considerations to be taken adequately into account

192. Despite significant progress in recent years in procedural development, capacities and procedures are still insufficiently developed to ensure that the complexities of environmental issues and diverse stakeholder interests are adequately taken into account in some of the main decision-making mechanisms at national level. This issue is of particular significance in relation to current procedures for environmental impact assessment (EIA) and the consideration of lease applications: while these are technically sound and make provision for stakeholder participation (through the EIA Review Committee and Land Management Committee respectively), they have a locality-specific focus and therefore do not allow the implications of proposed developments for landscape-wide flows of ecosystem goods and services to be taken into account, which may affect stakeholders well beyond the proposals' immediate areas of influence.

193. For example, Environmental Impact Assessments of site-specific cruise ship tourism proposals may focus on evaluating direct impacts such as water pollution or damage to sites visited by tourists, but fail adequately to consider indirect pressures on aquatic resources and NTFPs due to the demand generated by cruise ship visits; while the consideration of lease applications for ranching may address immediate impacts on forest cover and habitat, but fail adequately to consider impacts on river flow, drinking water quality and aquatic ecosystems downstream due to soil and vegetation disturbance, or the risk of clearance for pasture displacing traditional cyclical forms of agriculture into hitherto intact areas of vegetation.

Mechanisms are lacking for ensuring the financial sustainability of environmental conservation, management and restoration

194. Although the protected area models currently applied in Vanuatu, featuring local control and management, have low “running costs” compared to more conventional centrally-planned models with a focus on exclusion, the effectiveness of their management and protection in the long term does presuppose the availability of certain levels of financial resources. These are required at local level to ensure that PAs are maintained and facilities are adequate to ensure that visitors can be received in a way that meets their needs, while benefiting local communities and avoiding damage to the target ecosystems; and at systemic level, to ensure that ecosystem conditions in PAs are monitored consistently and that the overall estate is planned and managed consistently in such a way as to optimise cost-effectiveness and environmental benefits.

Site-specific barriers

Environmental issues and stakeholder interests are not effectively or equitably represented in planning and governance frameworks

195. Existing decision-making mechanisms in the target localities do not necessarily represent in an accurate or balanced manner the diverse interests of local stakeholders in relation to natural resource management, or provide effective and inclusive fora for their discussion. All of the target islands have island-specific Councils of Chiefs: however, although their authority is respected under local *kastom* and in national legislation (and they will therefore play a vital role as interlocutors and validators of the project), they do not necessarily reflect diverse grassroots opinions and interests. Specifically, this situation limits the effectiveness of the legal provisions that exist for local participation in decision-support mechanisms relating to environmental issues, including environmental impact assessments and determinations of lease applications, which depend primarily on councils of chiefs and provincial governments to represent local interests. Furthermore, these mechanisms tend to be location- and case-specific, and fail to take into account landscape-wide flows of environmental goods and services, a limitation which is felt at both national (see above) and local levels. The same limitations apply to the multiple NGOs, CSOs and community-based organizations that exist in the target islands and have potential to participate in environmental debates, given that their interests tend to be locality- or sector-specific.

Local stakeholders have inadequate capacities for the application of forms of resource management which protect global environmental values and flows of ecosystem goods and services

196. Despite the relatively large amount of agency and Government support to farmers, the focus of this has tended to be farm- and/or sector-specific (mirroring the sector-specific visions at policy level, described above). Little attention has been paid to developing capacities for resource management with specific potential to address environmental issues with a landscape-wide “R2R” perspective, for example through incorporating trees into cropping and pasture systems, or through farm zoning to promote synergies between different elements in accordance with spatial variations in biophysical and productive conditions.

Costs of initiating ecosystem restoration processes exceed short term benefits to stakeholders and their willingness to pay

197. Although ecosystem restoration, such as the establishment of vetiver grass barriers and eventual regeneration of *Acacia spirorbis* scrub on Aneityum, or the reforestation of riparian areas, has the potential to generate significant and sustained environmental and productive benefits for local communities, its feasibility in the short term is constrained by local people's limited access to financial resources, and the alternative demands placed on their time by livelihood support and income generation activities.

Local stakeholders lack the means by which to perceive ongoing benefits from the protection of environmental values and ecosystems goods and services

198. Despite the emphases on environmental sustainability in recent policy instruments (see Section 1.1.10), models for local economic development and agricultural production to date have tended to be based on the extraction of natural resources or the substitution of natural ecosystems. Little priority has been given in practice to developing capacities among local stakeholders for "win-win" environmentally-sustainable approaches, capable of generating economic benefits for local people while at the same time protecting the flows of ecosystem goods and services on which they depend, and contributing to the conservation of global environmental values. There is major potential, for example, for ecotourism in all of the target localities, but to date the dominant model has been cruise-ship tourism, which fails explicitly to provide local communities with the means and motivations to conserve their natural resources. The ecotourism ventures that do exist have tended predominantly to be owned and managed by small operators based outside of the target locations themselves, which again limits the benefits that they generate for local communities and their effectiveness as a stimulus for the conservation of the natural resources on which they depend.

Management capacities for protected areas are inadequate to ensure their long term sustainability

199. In addition to the financial resources required for the effective functioning and sustainability of the PA system (relatively limited compared to more conventional, centralised systems), as described above, the effectiveness and sustainability of individual PAs is dependent on the existence of at least a minimum level of management capacities. As shown by their Management Effectiveness Tracking Tool (METT) scores (see X), management capacities at present are seriously lacking. The PA model that predominates in Vanuatu, focusing on small-scale reserves under community ownership and management, does not necessarily require the same levels or types of management capacities as are normally required in more conventional, centralized PA systems, or in situations with significant conflicts between different stakeholder interests.

Access to knowledge

200. Large amounts of experience are constantly being generated by the multiplicity of organisations and projects that work throughout the country on issues related to natural resource management and conservation. Despite the existence of organizational groupings such as VANGO, however, experiences are seldom shared in an effective manner that would allow future initiatives to take advantage of and build upon them.

201. Furthermore, decision-makers at all levels typically lack access to reliable information on the status and importance of the natural resources within their remits, a situation which limits their ability to take decisions that optimise outcomes in terms of global, national and local benefits. Of particular significance in this regard is their limited access to information on the nature, magnitude and significance of the environmental services generated by different ecosystems and land use options, for use in land use planning decisions and in multi-stakeholder decision-making processes regarding proposed changes of land use.

202. Limited access to information on environmental values (local, in terms of ecosystem goods and services, and global, in terms of the presence of globally rare or threatened species or ecosystems) is also an obstacle to defining priorities for PA establishment that would optimise their effectiveness.

1.4. THE GEF ALTERNATIVE

1.4.1 Development objective, project objective and components

203. The objective of the project will be *to test and implement sustainable and integrated management of forest, land and marine resources to achieve effective ridge-to-reef (R2R) conservation in selected priority watersheds in Vanuatu.*

204. Project actions in support of the achievement of this objective will be structured into the following three components:

- **Component 1** will focus on ensuring the existence of a favourable enabling environment in support of the application of the model proposed by the project, including the mainstreaming of integrated R2R approaches into agriculture, livestock, tourism, fisheries and environment policies; the promotion of coordination between these sectors in order to minimize the risk of conflicts and perverse incentives for environmental degradation; the strengthening of environmental decision-making capacities and instruments, including land use planning guidelines, EIA procedures, and lease application approval procedures; and the strengthening of the PA system.
- **Component 2** will focus on site level activities, emphasizing the integration of landscape elements, focal area activities and sector priorities with an overall landscape perspective. Successive outcomes will include: strengthened planning and governance frameworks for landscape management; strengthened capacities for the application of sustainable production systems; ecosystem restoration; livelihood alternatives; local PA strengthening and integration; and local financial sustainability mechanisms.
- **Component 3** will focus on knowledge management, including the systematization and dissemination of best practices and lessons learned, the generation and supply of information on trends in ecosystem conditions to guide decision-making and planning, and monitoring and evaluation of project effectiveness, feeding back into adaptive management decisions.

1.4.2 Strategies

205. The core elements of the project's strategies for the delivery of global environmental benefits will be:

- i) The **empowerment of local stakeholders** in relation to the management of the natural resources on which they depend, for the generation of ecosystem goods and services. The processes that to date have simultaneously affected both the sustainability of local livelihoods and the status of global environmental values throughout the country have to a large extent been a function of conflicts between traditional ("customary") and "western" models of social organization and development; despite the constitutional and legal recognition of customary rights and structures, local stakeholders have typically been at severe disadvantage in relation to these conflicts due to imbalances in their access to information, technical capacities, economic resources, and political influence. The project will therefore focus strongly on empowering local stakeholders to formulate and apply forms of resource management that optimise benefits for their long-term social well-being and livelihood sustainability, and that combine respect for "customary" tradition with the need to adapt to changing circumstances. This approach is likely to be the most

effective for the conservation of global environmental values, given the traditional recognition of the value of healthy ecosystems for the generation of ecosystem goods and services, and the importance of stakeholder participation and ownership for the long term social sustainability of resource management strategies.

- ii) **The application of a landscape-wide spatial vision based on “ridge to reef” principles:** as shown in the maps of the target localities in section 1.2, there are strong spatial relations at landscape level between the ecosystems and productive land units on each of the target islands, with landscape-level flows of ecosystem goods and services between them, and also of environmental threats. As shown in the maps, these relations are in some cases “ridge to reef” (upstream-downstream) but in other cases run horizontally along ridges and coastlines. The effectiveness and sustainability of the project’s contribution to stakeholders’ livelihoods and to the conservation of GEVs is therefore dependent on applying a landscape-wide vision to resource management. In practical terms, this will be achieved by promoting support to local stakeholders in applying forms of resource management that promote these spatial flows and address spatial threats; this will be carried out within the framework of landscape-level structures for participatory planning and governance that will enable stakeholders to arrive at solutions that do not only optimize benefits at the level of individual households, villages or clans, but and seeks the optimal balance of outcomes in the collective interest at island level.

1.4.3 Outcomes and outputs:

Component 1: Improving the enabling environment for integrated sustainable land and coastal management.

Outcome 1.1: Integrated R2R considerations mainstreamed into sector development policies

Outcome targets:

- Tourism policy makes specific commitments for promoting the channelling of tourism income to environmental management
- Agriculture, livestock, forestry and planning policy documents include specific commitments for promoting compatibility between agricultural development and maintenance of ecosystem goods and services
- Fisheries and planning policy documents include specific commitments for protection of coastal and marine ecosystems through ICZM approaches

206. The project will support the development or strengthening of the Government’s policies in support of the application of integrated and sustainable land and coastal management, with an R2R vision. This will focus on the main sectors with implications for environmental conservation and the maintenance of flows of ecosystem goods and services, especially tourism, agriculture, livestock, forestry and fisheries. In order to maximise “buy-in”, policy recommendations will be developed with the full involvement of the relevant Ministries and Departments of Government; additional weight will be added to the recommendations by also involving traditional authorities (particularly the national and island-specific Councils of Chiefs) and provincial governments. National and international NGOs and international and bilateral development agencies will also be involved in supportive roles, through the provision of technical and advisory support.

207. The project's actions in relation to policy influence will recognize the valid motivations of the Government in stimulating the target sectors, as motors of national economic growth: rather than proposing to control their expansion per se, it will therefore focus on promoting the incorporation of considerations of environmental sustainability into sector growth. This will, in the medium and long terms, be positive for the sectors themselves, as it will ensure that they do not undermine the resource base on which they themselves depend, and at the same time will help to increase their resilience to climatic shocks; it will also help to ensure that the growth of individual sectors does not occur at the expense of the general good, undermining the sustainability of development as a whole; at the same time, this focus on sustainability will help to optimize the outcomes of these sectors in terms of their impacts on biodiversity and other global environmental values.

Output 1.1.1. Policy proposals for improving the contribution of tourism to the socially-sustainable generation of global environmental benefits

208. Tourism has the potential to contribute to the generation of social and environmental benefits in a number of ways. Given the growing scale and economic value of the cruise-ship industry, there is potential for cruise-ship companies to make financial contributions in support of social and environmental objectives, at both central and local levels, within the frameworks of their corporate responsibility programme. Now that the potential of the cruise-ship market has been so convincingly demonstrated by the growth of activity in this sector in the country in recent years, the Government is well placed to negotiate such contributions. The project will support the Government, through the Ministry of Tourism, in clarifying and consolidating its policy in this regard, leading to the generation of policy statements and regulatory instruments, and the eventual reflection of this stance in the next Tourism Development Policy and Strategic Tourism Action Plan (the current VSTAP is due for renewal in 2018). In parallel, concrete commitments will be negotiated with the companies, as proposed under Output 1.3.1 below.

209. There is also the potential for locally-managed alternative tourism initiatives to generate economic benefits to local communities, providing the communities with the means and the motivations to invest a part of this income in the protection of the environmental values which attract tourists. The project will provide advice to the Ministry of Tourism on the development of its policies in support of such forms of ecotourism, with a specific focus on ensuring real involvement and control by local communities, and their social and environmental sustainability. This will lead to this model being included as one of the priority issues of the next Tourism Development Policy. This will be complemented by regulatory provisions and instruments for ensuring the social and environmental sustainability of this sub-sector, under Outcome 1.2, and support to the implementation in practice of such alternative tourism initiatives in the target areas, under Outcome 2.4.

Activities:

- **1.1.1.1. Generation of study/guidance documents** analysing the potential for the cruise-ship sector and community-based ecotourism to contribute to environmental management and conservation
- **1.1.1.2. Provision of ongoing advisory support** to the Ministry of Tourism and related entities as appropriate in relation to the incorporation of provisions for cruise sector contributions and ecotourism
- **1.1.1.3. Support to the Ministry of Tourism in the drafting of policy documents**

Output 1.1.2. Proposals for promoting compatibility between sector development policies and the maintenance of ecosystem goods and services

210. The Vanuatu Agriculture Sector Policy (VASP) is generally supportive in terms of environmental issues, with specific policy directives in relation to the mainstreaming of environmental considerations into agricultural practices (PD 8.1) (including buffer zones and wildlife corridors), the incorporation of sustainable farming practices such as agroforestry and traditional practices (PD 8.2) and the promotion of organic farming PD 8.3). It includes limited detail, on the implementation of these policy directions, or on the harmonisation in practice of the objectives of agricultural development and sustainability. There are evident conflicts between its intentions and its implications in practice, as shown for example by the deforestation caused by the expansion of kava production on Pentecost island.

211. The project will support the Ministry of Agriculture in fine-tuning its policies, within the overall framework of the VASP, in relation to the integration of considerations of environmental sustainability into agricultural activities. Specific attention will be paid to ensuring that agricultural development is, as a matter of policy, promoted within a framework of integrated and environmentally-sustainable family-based farming systems, rather than on a sector-specific or crop-by-crop basis: this will lead to extension agents supporting farmers and communities in analysing and addressing the interactions between agricultural activities and their overall environment, and specifically their access (and that of others in the landscape) to environmental goods and services.

Box 2. Kava and environmental services on Pentecost: an example of the potential implications of policy influence

As a result of project influence, it is expected that the Government will adopt as policy the promotion of agricultural development within a framework of integrated and environmentally-sustainable family-based farming systems, and that this will be reflected in the nature of the support provided to local communities by Government extension agents. In south Pentecost, for example, a result of this would be that agricultural communities there would come to recognise the potential implications of the expansion of kava in terms of the degradation of village water sources and reductions in the availability of forest products (for example the vine used in the *nagol* land-diving ceremony, which is a major source of tourism income for the area), and take individual or collective action accordingly rather than responding solely to crop-specific economic motivations.

212. In the livestock sector, there is a particular risk of negative environmental implications resulting from the Government's policy of promoting domestic livestock production and processing, through its Livestock Restocking Programme, with the aims of improving food security and substituting local meat for imported products. This has the potential to accelerate deforestation and undermine traditional sustainable systems of production and land allocation, with a progressive increase in the areas fenced off for permanent pasture. As in the case of agriculture above, the project will aim at ensuring that Department of Livestock policies recognise the need for livestock expansion to occur in a responsible manner that does not undermine environmental and social sustainability, through the incorporation of an integrated landscape and livelihood approach in the definition of priorities for livestock promotion by the Department, linked to spatial zoning and norms developed by the local communities (supported in the target areas under Outcome 2.1).

213. Forest policies generally pose lower risks to environmental goods and services than those in the agricultural and livestock sectors. There is, however, room for optimising

environmental outcomes by ensuring that tree planting initiatives are planned in accordance with landscape-level biophysical and social dynamics and that, where possible, they are located and designed in such a way as to generate environmental services, for example through the protection of vulnerable slopes, water catchment areas and coastlines. The project will generate recommendations for the incorporation of such considerations into policy instruments in the sector.

Activities:

- **1.1.2.1. Generation of study/guidance documents** analysing the implications of current policies in the target sectors for the condition of global environmental values (GEVs), identifying opportunities for improving the mainstreaming GEVs into them and analysing the implications of this for national development objectives, with the full participation of the ministries in question
- **1.1.2.2. Provision of ongoing advisory support to the target sector ministries** in relation to the mainstreaming of GEVs in their policies, plans and operations
- **1.1.2.3. Support to the target sector ministries in the drafting/modification of policy instruments** making provision for the mainstreaming of GEVs

Output 1.1.3. Policy proposals in support of ICZM including protection of coastal and marine ecosystems on which fisheries sustainability and marine biodiversity depend

214. In addition to its support to the incorporation of environmental considerations in the tourism sector, which as explained above is strongly focused on the expansion of the cruise ship sector,

215. The project will support the introduction and application of an integrated vision to the management of marine and coastal zones (Integrated Coastal Zone Management), which will consider the interactions between the different key sectors that have potential implications for the status of global environmental values in these zones. This will include, for example, the consideration of the implications of cruise ship tourism for fisheries (complementing the environmental mainstreaming tourism proposed under Output 1.1.1) and, conversely, advice on how the implementation of the new Fisheries Policy (which is expected to be issued in 2016, before the start of the implementation of the project), should respond to the pressures and opportunities offered by the cruise ship sectors, and also to other demographic, developmental and environmental pressures affecting fishing communities and fisheries. The project will also focus strongly on spatial planning and decision-making in coastal and marine zones, through the generation of policy orientation, methodological guidance and technical inputs to support the application of the ICZM approach to planning and governance structures proposed at local level under Outcome 2.1.

Activities:

- **1.1.3.1. Generation of study/guidance documents** identifying and characterising the key policy instruments and sector activities in terms of their implications for ICZM, and including specific recommendations for mainstreaming and integration in accordance with ICZM principles
- **1.1.3.2. Provision of ongoing advisory support to the target sector ministries** in relation to the promotion of ICZM.

Outcome 1.2: Environmental planning and decision-making processes take integrated R2R considerations into account

216. Decisions on resource management, with potential implications for the environment are taken at a number of levels and through a number of mechanisms. The project will improve environmental outcomes by targeting these specific decision-making points, improving their effectiveness in such a way that they will take global environmental considerations and the maintenance of ecosystem goods and services better into account, with an integrated R2R perspective and optimising the balance and synergies between the goals of development and conservation, and between social, economic and environmental interests.

217. Key potential “entry points” for influencing the outcomes of decisions with environmental implications include the following:

- Provincial development plans
- Environmental impact assessments
- Land use planning guidelines

218. The project will influence environmental planning processes at local level through its interventions in its selected target areas, under Outcome 2. Actions in support of this outcome will focus specifically on the improvement of mechanisms and capacities.

Outcome targets:

- EIA procedures specifically require consideration of landscape-wide environmental and social dynamics
- 50% of EIAs specifically address landscape-wide environmental and social dynamics
- 50% of planning determinations nationwide that specifically address landscape-wide environmental and social dynamics

Output 1.2.1. Improved procedures for approving lease applications

219. The project will support the Ministry of Lands, in consultation with the members of the Land Management Planning Committee (see paragraph 98) in developing clearer and more specific guidelines on the criteria to be applied when considering lease applications, in order to ensure that these take into account the potential landscape-wide implications of the developments to which the lease applications refer, rather than solely “national interest” as presently required under the CLMA. It will also improve the efficiency and accuracy of the management of spatial information related to lease applications, through the provision of hardware, software and training for the establishment of a centralised Solutions for Open Land Administration (SOLA)⁵⁷ system in the Ministry of Lands, which will centralise data currently managed by different Government departments.

Activities:

- **1.2.1.1. Review of current lease approval criteria and their implications**, with full participation of the Ministry of Lands and the LMPC
- **1.2.1.2. Support to the drafting of improved lease approval criteria**, in collaboration with the Ministry of Lands and the LMPC
- **1.2.1.3. Support to the piloting and validation of the application of the improved lease approval criteria**, by the Ministry of Lands and the LMPC
- **1.2.1.4. Capacity development for SOLA**, including the provision of hardware,

⁵⁷ <http://www.flossola.org/about>

software and training.

Output 1.2.2. Improved capacities and regulatory instruments for consideration of landscape-wide (ridge to reef) considerations into Environmental Impact Assessments (EIA) studies and determinations

220. The project will provide support, in the form of training, the development of procedural guidelines and the recommendation of regulatory instruments, to ensure that EIA processes adequately consider the implications of development proposals for environmental and social dynamics at landscape level. The institutions supported will include:

- The Department of Environment and Conservation, in the Ministry of Lands and Natural Resources, in the formulation of procedural guidelines and regulations governing the EIA process overall;
- Other institutions responsible for the initial screening of development applications through Preliminary Environmental Impact Assessments (PEIA), including other Ministries, Departments, Government Agencies, local governments or municipal councils;
- The DECP and the EIA Review Committee in scoping EIAs and formulating terms of reference;
- The DECP and EIA Review Committee in reviewing EIA studies and in making determinations.

Activities:

- **1.2.2.1. Review of capacities and instruments for EIA in relevant institutions**, with particular attention to their adequacy for supporting the integrated consideration of environmental and social factors
- **1.2.2.2. Formulation of capacity development plan**, in consultation with all target institutions
- **1.2.2.3. Provision of advisory support for the improvement of EIA procedures and instruments**, to DEC and other relevant institutions
- **1.2.2.4. Implementation of capacity development plan**, with advisory and oversight from the project and through contracts with service providers in NGOs, academia and private sector as appropriate.
- **1.2.2.5. Monitoring and follow-up support** to capacities and functioning of instruments

Output 1.2.3. Land use planning guidelines providing for consideration of landscape-wide (ridge to reef) biological and social processes

221. Project support will focus in particular on improving processes within the Ministry of Lands and the multi-stakeholder Land Management Planning Committee in order ensure that the guidelines on which these base their land use planning determinations go beyond site-specific considerations of site suitability and impacts, to incorporate a broader, strategic vision that considers landscape-wide impacts, both direct and indirect, as well as cumulative impacts. This vision will be particularly relevant, for example, in the tourism sector, where individual hotels or resorts may not have particularly significant impacts on their immediate vicinity, but a series of such developments may generate significant cumulative impacts and displace alternative forms of land use that may be more compatible with the development

priorities of the area in question.

Activities:

- **1.2.3.1. Review of current land use planning guidelines and their implications**, with full participation of the Ministry of Lands and the LMPC
- **1.2.3.2. Support to the drafting of improved land use planning guidelines**, in collaboration with the Ministry of Lands and the LMPC
- **1.2.3.3 Support to the piloting and validation of the application of the improved land use planning guidelines**, by the Ministry of Lands and the LMPC

Outcome 1.3: Increased financial resources channelled from tourism operators to environmental conservation and PA management

222. In addition to advising at policy level (see Output 1.1.1), the project will facilitate the development and implementation of mechanisms for the channelling of funds from the tourism sector in support of the financial sustainability of environmental conservation and PA management.

Outcome target:

- \$150,000/year channelled from the tourism sector to environmental conservation and PA management by project end

Output 1.3.1: Corporate social and environmental responsibility commitments from the cruise industry

223. The project will facilitate negotiations between the Government and cruise ship operators with the aim of obtaining concrete commitments from the operators to dedicate financial resources to environmental management and restoration, and the operation of the PA system, as part of their corporate social and environmental responsibility programmes. FAO/GEF support to this process will greatly assist in raising its profile and bringing the key actors to the table in the negotiations, building on the preliminary moves that have been made in this regard by national and international NGOs: these negotiations may have to take place at the level of the overseas head offices of the operators, and may also involve facilitation support by the Governments of the countries (especially Australia) where they are based. The recent signing (in July 2013) of a Memorandum of Understanding between Carnival Australia and AusAID (now DFAT), to boost tourism and encourage sustainable economic development in the Pacific region (including support for priority activities in Vanuatu and Papua New Guinea) will also provide an important entry point for such negotiations.

Activities:

- **1.3.1.1. Generation of study/guidance documents** reviewing the current status and future growth projections of the cruise industry in Vanuatu, defining the financial sustainability requirements of environmental conservation and management in the country, and analysing a range of scenarios of levels and forms of contribution from the industry in terms of their feasibility, their financial implications and their potential benefits in terms of corporate social responsibility commitments.

- **1.3.1.2. Support to the Ministry of Tourism in the development of a negotiation strategy** for interactions with cruise industry representatives, based on the results of the study/guidance documents developed through Activity 1.3.1.1, and involving as appropriate other national and regional actors in order to show the broad base of support for the initiative.
- **1.3.1.3. Facilitation of negotiations with cruise industry representatives**, in Vanuatu and their home countries as appropriate: these negotiations will be led by the Government of Vanuatu, but weight will be added to the negotiating position of GoV by the involvement of FAO and (through its financial support to the process) GEF.
- **1.3.1.4. Support to the drafting and formalization of agreements**, based on the results of the negotiations with cruise companies
- **1.3.1.5. Ongoing monitoring and advisory support to the implementation of the agreements**, in order to troubleshoot problems and advise on adjustments that may be needed in response to lessons learned.

Component 2: Integrated ridge to reef management in priority island localities

224. At field level, the project will work in five target localities, the basis for the selection of which is explained in Section 1.2.1: these are Aneityum, North Efate, Middle Bush Tanna, South Pentecost and Gaua. These field level activities will be supported by the enabling framework of policies, plans and regulations which will be strengthened by the project under Component 1; at the same time, the activities in these areas will serve to generate concrete lessons and messages from the field to back up, inform and orient the ongoing improvement of the enabling framework.

225. Taking into account lessons learned from previous initiatives including GEF ID 3502: "Capacity Building and Mainstreaming for Sustainable Land Management in Vanuatu", close attention will be given to ensuring full participation of all community-level stakeholders in the formulation of these locality-specific actions, with full involvement of traditional authorities and clear arrangements for community engagement in order to ensure clarity and consensus regarding objectives and the responsibilities of all those involved, and to maintain relevance to evolving local needs and conditions.

Outcome 2.1: Target landscapes subject to integrated R2R planning and governance

226. A central element of the project's approach will be the empowerment of local communities for environmental decision-making and management, in order to address the power imbalances that constitute the central underlying obstacle to achieving optimal outcomes in terms of sustainable and equitable flows of ecosystem goods and services. To this end, the project will support the development and implementation of mechanisms for fully-inclusive representation, governance and planning of the management of natural resources, that allow the interests of marginalized stakeholders to be adequately taken into account, while respecting existing sociocultural frameworks and needs for social and economic development at local and national levels.

227. The landscape planning to be supported by the project will be closely coordinated with the initiatives of partner institutions and agencies operating in the target localities. On Efate, for example, On Efate, the project's activities will build upon advances made to date under the leadership of the SHEFA Provincial Government in relation to the participatory planning of the Efate Land Management Area (ELMA); and on Efate and Tanna, the project will

coordinate closely with the support by the SPREP/PEBACC programme (see section 3.1.2) to the protection of ecosystems and the strengthening of PAs of importance for ecosystem-based adaptation (EBA), in order to ensure the harmonization of criteria for spatial prioritisation and commonality of message in interactions with local stakeholders.

Outcome targets:

- 100,000ha in target localities covered by integrated landscape/ seascape management plans developed and implemented by local landowners
- At least 75% of stakeholders in all categories consider that the multi-stakeholder mechanisms developed with project support adequately represent them and address their needs.
- On at least 80% of the land in the target localities affected by management decisions (leases, land use changes) between project mid-term and end, the decisions coincide with provisions of R2R plans, norms and recommendations of local dialogue mechanisms

Output 2.1.1. Multi-stakeholder mechanisms for landscape planning, decision-making and conflict management covering all three target localities

228. The project will facilitate the operation and, as necessary, the establishment or adaptation, of mechanisms for multi-stakeholder participation in landscape planning, decision-making and conflict management. These mechanisms will aim, for example, to enable local stakeholders to arrive at consensus-based decisions on issues such as levels and types of cruise-ship activity, or leases for agricultural or ranching activities. In the case of leases, the decision as to whether enter into a lease is in theory that of the legally-recognised landowner, but this decision may have significant environmental and/or social implications for other stakeholders (including those with informally socially-recognised use rights over the area's forest resources, or those downstream who depend on their role in hydrological regulation): these mechanisms will help to ensure that the decision is not taken only in the short term individual interests of the landowner him/herself (or is influenced by unfair pressure by the prospective lessee) but reflects the balance of interests of the area's population as a whole.

229. These processes will take as a starting point any existing social structures existing in the areas. Involvement of the island-level Councils of Chiefs, in particular, will be vital in ensuring the validity under the customary (*kastom*) system of any plans, decisions and agreements arrived at. As explained in section 1.1.8, however, stakeholder roles, interests and power relations are typically complex and overlapping, and it cannot be assumed that the Councils of Chiefs are able adequately to reflect the needs and interests of all local stakeholders involved in, or potentially affected by, such processes; nor do the positions of formally recognised custom landowners necessarily reflect the needs and interests of the multiple other stakeholders who may have informal rights over or interests in their lands and/or the resources on them. The project will therefore seek to work through a diversity of representation channels and mechanisms, both formal and informal, to ensure that the interests of all concerned stakeholders, especially women and other marginalized groups, are taken into account as far as possible; care will however be taken to ensure that these processes are in all cases conducted in consultation with and with the approval of the Councils of Chiefs.

Activities:

- **2.1.1.1. Participatory discussion of proposals to improve planning and governance and establish or strengthen structures:** this will be essential to maximize stakeholder buy-in to the processes and to the structures themselves, and to ensure equitable representation of the interests of diverse stakeholder sectors in the processes.
- **2.1.1.2. Participatory review of existing social structures with implications for planning, decision-making and landscape management,** in order to maximize social relevance and sustainability while at the same time identifying needs for improvement in order to ensure effectiveness and equitability (including gender considerations).
- **2.1.1.3. Participatory formulation of proposals for establishment or strengthening of multi-stakeholder mechanisms,** including aspects of the types of stakeholders to be represented in each, their relation with existing bodies at community, provincial and central Government levels, their remits, powers and responsibilities, and provisions for adaptive management and conflict resolution aimed at ensuring their sustainability.
- **2.1.1.4. Facilitation of the establishment, strengthening and ongoing operation of the multi-stakeholder mechanisms,** with strong emphasis on the participation of local councils of chiefs and provincial governments, with the aim that these will take over troubleshooting and support roles for the mechanisms beyond the life of the project.
- **2.1.1.5. Monitoring, systematization and dissemination of lessons learnt,** aimed at eventual replication of the model to other localities throughout the country and potential recognition of the model in national policies and legislation.

Output 2.1.2. Norms for resource management practices developed and agreed among stakeholder groups covering target localities

230. The project will also support local communities, through the multi-stakeholder mechanisms to be developed under Output 2.1.1, and in conjunction with the Departments of Agriculture, Forestry and/or Fisheries as appropriate, in developing norms to govern practices of resource management or use that have potentially negative impacts on biodiversity or the sustainability of land management.

231. These norms will aim to ensure, for example, the sustainability of NTFP extraction, focusing in particular on localities where there is a significant risk of these resources being overexploited, with negative consequences for global environmental values. There is in particular a risk of this being linked to increases in tourism activity, as is occurring for example on Aneityum, as a result of high levels of cruise ship activity there (see Section 1.3.1). These norms will be based on participatory situation analyses with community members, complemented by technical studies of the ecology of the target species, the implications of extraction for the overall ecology and diversity of the forests in which they are found, and the current status of the resource in relation to its sustainable productive potential.

232. Norms will also be developed, subject to detailed community consultation and participation, governing practices and levels of harvesting of marine products, such as sea cucumbers and lobsters. Overharvesting of the latter is another problem on Aneityum, again due to demand generated by the extremely high levels of cruise ship tourism there. This will

learn from and build on successful past examples of community-based norms and regulations in the country (see Box 3)

Box 3. Example to date of community-based norms on marine resource management

Trochus, a marine snail whose shell is used for making buttons and inlay and as an ingredient in certain paints, has been the single most important commercial marine product for many coastal villages. Through the 1980s trochus populations were typically overharvested however, and yields became very low. Responding to this problem in 1990 the Vanuatu Fisheries Department initiated a program to encourage communities to manage their trochus stocks (Amos, 1993). Initially the program was introduced in five fishing villages, which had responded positively to radio announcements stating the availability of the Fisheries Department for such activities. Villagers judged the results highly successful and the practice spread to other villages.

Hearing reports of the success of this program Johannes (1998a) interviewed villagers in 26 coastal villages in Vanuatu about their marine resource management (MRM⁵⁸) measures in late 1993. Villages that adopted the trochus management measures that had been suggested by the Fisheries Department (harvest closures followed by short harvest periods plus strict observance of size limits) often reported much improved subsequent harvests.

Johannes (1998a) found that 25 of the 26 villages he surveyed had, since 1990, implemented MRM measures based on the success of the five original trochus management trials. These measures varied from village to village, but covered not only trochus, but also in some villages, lobster, octopus, bêche-de-mer (sea cucumbers), green snails, various clams, crabs, various types of reef fishes, and/or marine resources in general. These measures consisted of closures of certain areas or tabus (bans) on taking various species or on the use of certain fishing gear including spearguns and nets, especially gillnets (Johannes, 1998a). The results of this modest initiative by the Fisheries Department, costing a few thousand dollars in the initial years, had a more positive impact on marine resource use than a multi-donor, aid-funded Vanuatu fisheries development project that had cost tens of millions of dollars (Johannes, 1998a).

At Analgowhat village on Aneityum, for example, in 1993 clans were reported to have independent control over portions of the fishing ground, while and inter-clan disputes prevented community-wide conservation measures. Clan measures included total fishing closures, staggered so some fishing grounds are always open; Trochus closures; and rock lobster closures. In 2001, fishing grounds nearest village were closed to trochus, all methods of fishing for finfish, shellfish and bêche-de-mer; and MPA status was being considered for waters surrounding a tourist development within village's tenured fishing grounds.

Regulations on harvesting of the coconut crab (*Birgus latro*) have been effective in SANMA province, through a provincial by-law which imposed a ten-year ban period in order to maintain its population stock for effective conservation of the species.

233. The focus of the project on community-based fisheries governance is aligned with long-standing Government policy in this regard (see Section 1.1.13), which avoids dependence on under-resourced entities of central Government. It will also take into account lessons learned in the country regarding the conditions for success of this approach. It appears that this approach works well where traditional tenure facilitates effective local control of fishing activities: one study⁵⁹ indicated that traditional fisheries resource management is only

⁵⁸ A marine resource management (MRM) measure is defined here as a measure employed deliberately to reduce or eliminate overfishing or other damaging human impacts on marine resources

⁵⁹ Whyte, J, B.Thaman, A.Tapisuwe, S.Siwatibau, B.Tamata, and J.Kalotap (1999). Community-Based Regimes for the Management of Marine Resources: Concepts Sustainability. FSPI Island Consulting, Port Vila, Vanuatu.

effective when (a) traditions remain strong, (b) immigration has not led to sectors of the population not responding to local institutions, (c) cosmopolitan influences are relatively weak, and local leaders are committed to resources management. Such conditions are usually not met in urban or peri-urban areas, so the approach may face challenges in the North Efate target area, but has a high probability of success in the other areas (Aneityum, Tanna and South Pentecost) where the conditions are largely met. The project will also take into account that, under this approach, enforcement of customary management is generally carried out by the residents of the management area concerned, and that this enforcement is often more effective when directed at outsiders, as opposed to residents of the area concerned: complementary conflict management arrangements may be required in order to address intracommunity infringements of rules.

Activities:

- **2.1.2.1. Technical studies of resource status and threats affecting GEVs**, in order to inform the identification of needs for norms and the definition of their provisions. This will include baseline evaluations of the conditions of coral reefs and seagrass beds in the target localities, a need which has been highlighted by the Department of Fisheries.
- **2.1.2.2. Participatory analyses of needs for norms and effectiveness of existing provisions**, in order to ensure local buy-in and therefore the effectiveness and social sustainability of the proposed or improved norms.
- **2.1.2.3. Participatory formulation, dissemination and validation of the norms**, with particular attention paid to the definition of responsibilities and procedures for their enforcement, the definition of appropriate sanctions and the avoidance of unnecessary negative impacts on the livelihoods of more vulnerable sectors of society due to the application of the norms.
- **2.1.2.4. Ongoing monitoring, oversight and advisory support** in order to enable participating communities to adapt the norms as necessary on the basis of lessons learned.

Output 2.1.3. Integrated landscape/seascape management plans developed and implemented by local landowners over 100,000ha

234. In order to optimize the implications of the decisions and norms proposed under Outputs 2.1.1 and 2.1.2 for global environmental benefits and the generation and maintenance of flows of ecosystem goods and services, in accordance with the project's guiding "ridge to reef" concept, it is essential that they incorporate a landscape-wide vision. This will be ensured through the facilitation by the project of the negotiated and participatory preparation of integrated landscape/seascape management plans, which will define how priorities and principles for natural resource management will vary across the landscape/seascape. These plans will take into account not only factors specific to each land unit, such as their productive potential, environmental values and fragility, and sociocultural importance; but also landscape-level interrelations between units. These landscape-level considerations may include:

- Upstream/downstream hydrological flows, which may determine the stability of communities' access to water, and conversely may have negative impacts such as the deposition of sediment on coral reefs;
- Territorial divisions between landowning groups or "clans", which may predate the

model of concentrated nuclear villages imposed as a result of European colonial influence;

- Productive and extractive practices, which may involve people venturing beyond the immediate vicinities of their villages, for example for hunting and gathering;
- Landscape-level demographic flows, for example due to the influx into Efate of people from other islands to take advantage of the employment opportunities in the capital, Port Vila;
- The landscape-wide dimensions of the impacts of climate change, for example in terms of variations in vulnerability to extreme rainfall and drought events, the risk of extreme events such as flash floods, with upstream-downstream implications, the buffering role of ecosystems such as mangroves, and the possibility of the spatial migration of the boundaries of ecosystems due to changes in sea level or temperature and rainfall regimes.

235. Subject to the results of the participatory planning processes to be facilitated by the project, it is expected that these plans will include the spatial definition of zones for environmental protection, where leases for productive activities such as tourism or ranching are not to be issued and community-based regulations would be applied to prohibit any such activity; for sustainable agricultural practices applied by the communities themselves; for commercial activity (such as agriculture, ranching or tourism) by lessees; and for settlements. These broad categories may in turn feature internal refinements: for example, “protection” zones may be divided into areas which may be used for low-level sustainable hunting and gathering by community members, and other areas which may be subject to strict protection (*tabu*) in accordance with customary tradition.

236. The plans will also make provision for adaptation to climate change (CC), based on the results of technical analyses of its likely implications. These analyses will consider how CC may affect flows of ecosystem goods and services (such as hydrological regimes), and the functioning and vulnerability of both natural ecosystems and agricultural or livestock-based production systems, as well as the importance of different ecosystems (such as mangroves and coral reefs) for ecosystem-based adaptation (EBA). The management options and zoning to be provided for in the plans will be defined accordingly in order to maximize resilience, for example through making special provision for the protection of particularly vulnerable ecosystems or for those with particular EBA potential, and for emphasising resilient production systems in areas with high vulnerability (for example through the inclusion of high densities of trees in cropping systems in order to buffer against drought and storms).

237. In the case of Efate, this zoning will complement the processes led by the Efate Council of Chiefs and the SHEFA provincial government which have led to the spatial definition of the Efate Land Management Area (ELMA) in the forested centre of the island; the additional zoning that is proposed with project support will extend this zoning down to the coast, in accordance with the “ridge to reef” model.

Activities:

- **2.1.3.1: Participatory analyses of spatial dimensions of environmental threats and processes, and discussion of proposals to formulate plans:** stakeholder buy-in to the processes of landscape-level planning will depend on their conviction of the existence and nature of the issues to be addressed by the plans, resulting from these

participatory analyses.

- **2.1.3.2: Technical studies of the spatial dimensions of environmental threats and processes**, aimed at validating and complementing the participatory analyses, giving a sound scientific basis to ensure the relevance and effectiveness of the plans.
- **2.1.3.3: Facilitation of multi-stakeholder negotiated formulation of spatial plans**, based on participatory review and discussion of the combined results of the participatory analyses and technical studies: careful attention will be paid to the methodological design and facilitation of these processes in order to ensure that all of the stakeholders potentially affected by the provisions of the plans are able to participate equitably and effectively, including those typically marginalised as a result of social and cultural norms.

Outcome 2.2: Farmers, ranchers and fishers are managing resources sustainably, resulting in improved flows of ecosystem goods and services, as a result of increased capacities and awareness

238. The project will build capacities among the populations of the target islands to manage their resources sustainably in pursuance of their goals of economic development, livelihood sustainability and resilience, while at the same time respecting and contributing to the implementation of the provisions of the landscape-level plans proposed above. The project will specifically focus in this regard on production systems which have potential to contribute to the generation or maintenance of environmental goods and services.

239. As explained in Section 1.3.1, the sustainability of traditional cyclical farming systems is in many localities throughout the country being increasingly undermined by the growth and spatial concentration of population. In some localities there is evidence that farmers have adapted to these pressure through the intensification of their production systems, including the increased incorporation of woody perennials (for example *Canarium indicum* and coconuts): under conditions of land scarcity, these play increasingly important roles as boundary markers, reducing the risk of conflicts over land ownership and use rights; and under conditions of increased extractive pressure on the land they play important roles in recycling nutrients and providing dietary supplements.

240. The support to be provided by the project will therefore largely focus on helping farmers in the target localities to adopt similar adaptive responses, through a combination of knowledge sharing and experimentation. Given the diversity of conditions and needs across and between the project localities, the project will avoid predetermined prescriptions, and instead facilitate the participatory design of site-specific models: the main emphasis, however, will be on the use of spatial or sequential agroforestry systems featuring the integration of increased numbers of trees and shrubs into cropping systems. Emphasis will be placed, wherever possible, on using native species such as *T. orientalis* and *A. zizphoides*, or naturalized species such as *Gliricidia sepium*, in order to maximize acceptability among farmers and facilitate access to planting material. Additional elements of these systems may include, as appropriate, vetiver grass contour barriers to control erosive runoff flow, and cover crops such as *Mucuna* to reduce rainfall impact. These improved cropping systems will be complemented by the promotion of energy-efficient drying systems for agricultural products such as copra, which will reduce fuelwood demand.

241. The project will also promote sustainable agrosilvopastoral systems, with increases in the numbers of trees and shrubs located either in pasture areas as shade trees, or around

them as live fences. These systems will have agronomic benefits in terms of reduced heat stress and improved access to tree-based fodder, as well as contributing to nutrient recycling and rainfall infiltration, reducing soil erosion and providing micro-habitat and connectivity services for biodiversity. These changes will be complemented, as appropriate on a site-specific basis, by other practices such as within-farm rotation of pasture and cut-and-carry systems based on planted fodder banks. These interventions will build on a strong baseline of investment in the improvement in herd genetics and management practices, supported by the National Livestock Programme, which will contribute to productivity and thereby limit land demands.

242. These practices will help to maintain the role of vegetation in slowing runoff and promoting water infiltration, thereby contributing to the stability of flows in water courses, and reducing erosive soil loss and downstream sedimentation.

243. The project's support to sustainable production alternatives will be based on initial processes of participatory analysis with the target communities, in order to ensure relevance and sustainability. It will combine conventional extension support with participatory learning and experimentation, including the use of the Farmer Field School model. In the process, the project will also aim to strengthen local and national capacities for extension support, in the form of the Department of Agriculture extension agents present on the target islands, instead of setting up parallel extension systems that marginalize DoA extension agents, as has been the practice of many NGOs to date.

Outcome targets:

- 6,625ha increase in area over which sustainable hillside farming practices are applied, in target localities apart from Gaua
- 600ha increase in area over which sustainable hillside ranching practices are applied, in target localities apart from Gaua
- 500ha increase in area over which community-based fisheries regulations are effectively applied, in target localities apart from Gaua
- 10% increase in reef health indices in all target localities apart from Gaua
- 10% increase in fish catches per unit of effort in all target localities apart from Gaua
- 14% reduction in quantities of firewood used for drying of copra and other agricultural products in all target localities apart from Gaua

Output 2.2.1. Extension modules for sustainable production models incorporating R2R concepts

244. In consultation with the target communities, and in collaboration with DoA, the project will support the formulation of extension modules for the promotion of sustainable production models, combining, as explained above, conventional methods of extension with more participatory and experimental approaches. These modules will include the definition of the production systems and the main issues on which capacity development will focus, including (as relevant) agronomic/productive considerations, organization, business management and marketing, and environmental management and sustainability. The modules will be used by extension workers and others as a framework for the development and delivery of extension materials and training events, and also for the support, facilitation and oversight of farmer-led technology development.

245. Within the framework of these modules, the project will also provide advisory and

financial support to the formulation, publication and dissemination of extension materials including technical guidance booklets, leaflets and posters. These will be developed in collaboration with DoA in order to promote capacity development, ownership and sustainability of access to the materials.

Activities:

- **2.2.1.1: Review of extension needs**, through participatory reviews by the target communities of the adequacy and implications of their existing resource management and production practices, their current levels of knowledge, and their aspirations:
- **2.2.1.2: Participatory review of content and effectiveness of current extension services**, including considerations of coverage, methodology and content, comparing the views of community members with those of the extension agencies themselves.
- **2.2.1.3: Support to formulation of extension modules**, through technical advice and orientation to extension agencies based on the results of the participatory reviews.
- **2.2.1.4: Support to the production of extension materials**, including proposals of technical content and format, and support to production costs.
- **2.2.1.5: Support to the validation of extension modules and materials** in the participating communities.

Output 2.2.2. Field schools and mechanisms for participatory learning and experimentation in target localities

246. In collaboration with DoA and NGO extension agents, as relevant, the project will support communities in the target areas in establishing and managing Farmer Field Schools, adapted as necessary to site-specific cultural conditions. These will serve as opportunities for learning, experimentation and exchange of experiences, with the aim that the farmers themselves will be fully involved in identifying management options capable of meeting the objectives of productivity, viability and sustainability.

Activities:

- **2.2.2.1: Community-level discussion of FFS** in order to introduce and discuss the concept and how it compares with and complements extension approaches used to date, to identify participants with interest, commitment and skills in leadership and communication, and to ensure community-wide support.
- **2.2.2.2: Support to participatory planning of each FFS**, including issues to be addressed in each case, and the formulation of work plans (normally related to crop production cycles).
- **2.2.2.3: Facilitation support to FFS, including provision of materials:** although the FFS will be farmer-led, they will at least initially require advice on methodological and organizational aspects, and in analysing and interpreting results.
- **2.2.2.4: Support to systematization and sharing of FFS experiences.**

Output 2.2.3. Pilot solar driers for copra and other agricultural products

247. In addition to supporting the development of capacities for the formulation and scaling up of sustainable models of production, the project will provide direct financial support for the establishment of pilots of productive options capable of generating environmental benefits, in order to demonstrate their potential and accelerate their uptake. The nature of these pilots will be further confirmed through participatory processes of consultation early

on in the project. One example proposed during the PPG phase is the establishment of pilot solar driers for copra and other agricultural products, as an alternative to the current models which use consume large amounts of firewood and cause severe localised pressures on forest resources.

248. In addition to having lower environmental impacts than current practices, such models have the potential to reduce labour costs and improve product quality and price, thereby improving overall profitability. It is therefore likely that following initial investment by the project, these models will be subject to further scaling up, on a spontaneous basis, by other farmers. The project will also help farmers in gaining access to financial support from other, sustainable, sources.

Activities:

- **2.2.3.1: Community-level definition of needs and opportunities for support**, and potential for productive and environmental benefits: this will ensure the relevance of the support, and also the objectives and conditions of the donations.
- **2.2.3.2: Support to installation of facilities**: it is intended that project funds will be used for the purchase and transport of materials, and the provision of technical support to the installation, but that local labour costs will be met by the participating stakeholders.
- **2.2.3.3: Training on use of facilities**, to optimise productive and environmental benefits
- **2.2.3.4: Follow-up support**, including dissemination of lessons and advice on financing options for upscaling

Outcome 2.3: Capacities of ecosystems for generating goods and services are permanently restored in priority areas affected by land degradation

Outcome target:

- 800ha area of degraded lands subject to restoration, resulting in increase in carbon stocks of 153,329tCO₂

Output 2.3.1. Ecosystem restoration programmes implemented in all target localities

249. In all of the target localities, the project will provide direct investment support to the restoration of areas affected by land degradation, in order to facilitate the recovery of their capacity to generate ecosystem services. In all of the localities, this initial investment support will be accompanied by the development of sustainable financing strategies (see Outcome 2.6): this is essential because, at least on Aneityum, the magnitude of the erosion problems is too great to be resolved through short-term external projects such as this one. The initial investment support is justified as a “pump-priming” exercise, aimed at demonstrating in practical terms to sources of sustainable funding support (such as the cruise ship industry) the kinds of activities which there is potential for them to support, and the kinds of benefits these are capable of generating; it will also raise (or in the case of Aneityum, refresh) awareness among local people on the target islands of the practical feasibility and benefits of ecosystem restoration and management, as an element of the broader package of project support.

250. Experiences to date with restoration on Aneityum, which confirm its technical feasibility, are summarized in Box 4. The specific details of the practices to be used in the other target localities will be confirmed at project start up on the basis of technical studies and stakeholder consultations; they are likely to rely more on native fast-growing broadleaved multi-purpose trees (such as *Trema orientalis* and *Alphitonia zizphoides*, which form part of the natural seral succession in some parts of the country⁶⁰), combined where appropriate with grass species and cover crops aimed at slowing cross-surface water flow and trapping runoff sediment. Subject to the results of location-specific studies and discussions, restoration will also include mangrove replanting aimed at restoring the functions of this ecosystem as spawning, nursery and grow-on areas for marine fauna, as well as its role in buffering the coastline against climate change-related sea level rise.

Box 4. Restoration experiences to date on Aneityum

Aneityum has been the subject of erosion control activities coordinated by the Department of Forestry, with support from DFID in the 1980s, from 1989 to 1991 from New Zealand Official Development Assistance, and subsequently from 1996 to 2002 with further NZ support. These activities complemented the establishment and management by the DoF of large scale plantations of *Pinus caribaea* var. *hondurensis*, from 1982 on.

Through the earlier NZ support, erosion control activities were carried out at three trial sites, located near Utche and Anelghowhat. These activities were successful in trapping sediment in valley bottoms, but of the grasses, legumes and other plants established in the sediment, only vetiver grass (*Vetiveria zizanioides*), wild cane and pandanus survived in significant numbers, with vetiver grass being the most successful. The subsequent longer duration activities built on these earlier findings, and confirmed the importance of vetiver grass for soil stabilisation, slowing erosive cross-surface movement of water and trapping soil, accessing nutrients (due to inoculation with mycorrhizae) and acting as a windbreak, therefore acting as a pioneer “nursery” element that facilitated the subsequent establishment of other trees including the native *Acacia spirorbis* and *Pterocarpus indicus* as well as *P. caribaea*, and thereby permitted the gradual succession to a sustainable and low-erosion vegetation cover dominated by shrubs and small trees, with significant soil litter cover.

Activities:

- **2.3.1.1: Participatory discussion and planning of restoration activities:** although as explained below the cost of labour and materials will be met by the project, ensuring understanding of the objectives and benefits of the restoration activities among the community as a whole is important in order to promote social sustainability and minimize risks such as fire.
- **2.3.1.2: Provision of financial and technical support to restoration activities,** including the production of plants and transport of plants, the purchase of equipment (spades, hoes etc.) and labour costs: technical and supervisory support will also be funded, but with care being taken to avoid undermining local identification with the initiatives.
- **2.3.1.3: Monitoring and systematization of experiences,** with the full participation of local stakeholders in order to maximize the potential for scaling up.
- **2.3.1.4: Dissemination of experiences and technical advice** to potential sources of ongoing financial support, focusing on aspects of technical, logistical, social and organizational feasibility, and cost-effectiveness.

⁶⁰ Barrance A.J. (1995): Traditional knowledge as a basis for village forestry in Vanuatu. *Commonwealth Forestry Review* 74(2).

Outcome 2.4: Local people in target localities have opportunities and capacities to perceive direct benefits from conservation, sustainable land management and sustainable forest management

251. Some land management decisions, while in the overall common interest of stakeholders in the target landscapes, may imply opportunity costs for specific individuals or communities (for example, when a landowner rejects the opportunity to enter into a lease with a rancher in order to avoid damaging an island's water sources). The project will support the development and implementation of livelihood alternatives with the specific aim of offsetting or compensating these opportunity costs, and will thereby be differentiated from and complementary to other livelihood support projects in the target areas that have more general social and economic development objectives. The existence of opportunities for obtaining concrete livelihood benefits has been shown in the past to be a key determinant of communities' continued buy-in to natural resource conservation strategies, such as restrictions on extractive activities.

252. The project will also explore on an ongoing basis opportunities to collaborate with other livelihood support initiatives, in order to ensure adequate coverage and impact at field level, given the size of the target localities and the multiplicity of issues that it is intended to address with relatively limited GEF resources. These complementary (cofinancing) initiatives may include Government and NGO-supported projects working on issues such as agricultural development, NTFP management, ecotourism, small and medium enterprise development, and REDD. There are particular opportunities for "conservation-friendly" forms of livelihood support activities to generate benefits for women, especially in the case of ecotourism, where they can earn income directly from the management of visitor accommodation and catering facilities, and NTFPs, given that existing value chains for NTFPs are largely controlled by women. These options compare favourably with the alternative scenario featuring land conversion for agriculture and ranching, the economic and power benefits from which typically accrue mostly to men.

Outcome targets:

- 1,300 local people receiving economic benefits from sustainable ecotourism
- 260 local people receiving economic benefits from sustainable NTFP extraction
- 130 local people receiving economic benefits from sustainable PES schemes

Output 2.4.1. Ecotourism development plans formulated with local participation in each target locality, including carrying capacity studies

253. The natural and cultural attractions in the target areas provide excellent potential for alternative forms of tourism beyond the cruise-ship model that currently dominates: there are indeed at present a considerable number of small businesses offering alternative attractions such as visits to waterfalls, swimming holes, traditional ("kastom") villages, the Yasur volcano on Tanna and the land-diving (*nagol*) on Pentecost. Most of these businesses are, however, owned and managed by operators based in the main urban centres such as Port Vila and Luganville rather than by the villagers themselves, and the scale of feedback of benefits to local communities is limited.

254. In order to optimise benefits and ensure social and environmental sustainability, the development of ecotourism in the target areas must be carried out in a planned and regulated manner. To this end, the project will support provincial governments and community organisations in the target areas in the formulation of ecotourism development

plans at provincial and/or island level.

255. On South Pentecost in particular, the project will support the development of eco-cultural tourism, generating income and benefit both for the local communities and for the management of the CCA. This support will include support to the development of accredited eco-cultural tourism products and training for SME owners, and the development of systems for governance and the administration of visitor fees (including cruise-ship tourism), in order to optimise their contribution to socio-economic development, eco-system rehabilitation and biodiversity conservation in the area.

Activities:

- **2.4.1.1: Participatory definition of objectives and principles**, in order to ensure clarity and agreement among stakeholders regarding the concept of ecotourism, the importance of local ownership and equitable benefit distribution, and its dependence on the conservation of natural values on which it is based.
- **2.4.1.2: Social and environmental baseline and carrying capacity studies**, in collaboration between the participating communities and outside researchers: these studies will provide the bases for the definition of plans and norms determining ecotourism practices and visitor numbers:
- **2.4.1.3: Participatory formulation of locality-wide plans for ecotourism development**, including the definition of spatial priorities and the sequencing of activities, and taking into account potential cumulative impacts and landscape-wide factors such as access and infrastructure.
- **2.4.1.4: Capacity development**, covering aspects including marketing and environmental education in order to optimize overall destination attractiveness.
- **2.4.1.5: Participatory monitoring and systematization**, as the basis for sustainable adaptive management (allowing adjustments to management as needed, in response to detected impacts) and replication.

Output 2.4.2. Ecotourism initiatives managed by local communities or with provision for generating significant benefits for local communities, including provisions for environmental sustainability

256. Within the frameworks of the above plans, the project will provide advisory support and limited amounts of financial assistance for the establishment of ecotourism ventures in the target areas. This support will primarily be aimed local communities as the owners and controllers of these ventures, but may also include advice to external operators on the development on partnerships with local communities.

Activities

- **2.4.2.1: Site-specific participatory planning**, focusing on aspects such as the identification of attractions, the planning of visitor routes, accommodation and other facilities, and needs for capacity development.
- **2.4.2.2: Training and advisory support**, focusing on site-specific aspects such as ecosystem management and reinvestment (aimed at optimizing aesthetic and interest value), visitor relations, facility management, organization, financial management, benefit distribution and impact monitoring.
- **2.4.2.3: Infrastructural investments**: the project will make limited and highly targeted investments in tourism infrastructure in the target localities, helping to “kick

start” community-based tourism initiatives. The precise nature of the investments will be defined on the basis of the participatory planning proposed above; the investments themselves will be made either through direct transfers to community-based organizations, or through service contracts with local service providers.

- **2.4.2.4: Environmental management and monitoring**

Output 2.4.3. Community-based enterprises generating sustainable income from forest and agroforestry products as a motivation for conservation

257. NTFPs already make an important contribution to local economies and livelihoods (see Table 3), and there is potential for this to be increased if community members are provided with the required access to markets and technical capacities. A number of NTFPs, such as navelle (*Barringtonia edulis*) and nangai (*Canarium indicum*) nuts, are commonly sold in local and national markets (including the large market in the capital Port Vila, on Efate island, that caters both to local consumers and to cruise ship tourists), and local people on the target island of Aneityum sell baskets, mats and other forest-based handicrafts to cruise ship tourists. Potential markets for these kinds of products are likely to grow in line with the increasing levels of tourism activity in the country. This a double-edged sword: on the one hand, if well managed NTFP extraction and commercialisation may serve to strengthen the valuation by local communities of their forest resources, and their motivation to protect them when faced or example with decisions regarding ranching leases; on the other, poorly regulated NTFP extraction can lead to overexploitation and negative impacts on the populations of the species in question and the ecosystem as a whole.

258. Currently marketed products such as navelle and nangai nuts, and reeds for baskets and mats, are likely to provide a starting point for the further development of NTFP-based businesses. Options will be furthered explored and confirmed through participatory analyses to be undertaken in the course of the project.

259. On its own, NTFP-based businesses are unlikely to be able to generate sufficient income to be able to compete with the short term income that might be generated through forest clearance or future logging initiatives^{61,62}, and so they are considered as only one of a range of complementary options for supporting local livelihoods and motivating forest conservation, rather than as a direct stand-alone alternative.

260. Activities in support of this output will be closely coordinated with those of the ACIAR project “Enhancing value added products and environmental benefits from agroforestry systems in the Pacific” (see Section 3.1.2) and in those areas where there is geographical overlap the ACIAR project will contribute directly to the achievement of the project’s goals in this regard.

Activities:

- **2.4.3.1:** Participatory analyses of options for generating income from sustainable management of forest products
- **2.4.3.2:** Technical studies of ecology to determine permissible offtake levels and

⁶¹ Changing Forestry Regimes in Vanuatu: Is Sustainable Management Possible? Ralph Regenvanu, Stephen W Wyatt, and Luca Tacconi. The Contemporary Pacific, Volume 9, Number 1, Spring 1997, 73–96 ©1997 by University of Hawai’i Press. <https://scholarspace.manoa.hawaii.edu/bitstream/handle/10125/13132/v9n1-73-96.pdf?sequence=1>

⁶² In 1998, a ban on the export of whole round logs was enacted and the government expelled international loggers, dominated by Malaysian firms, from their operations in the country. As a result there are currently no active industrial logging concessions in Vanuatu and timber extraction continues primarily in the form of small-scale harvesting carried out with the use of mobile sawmills.

management options

- **2.4.3.3:** Facilitation of preparation of resource management and business development plans, including resource monitoring protocols
- **2.4.3.4:** Capacity development including training on resource management and monitoring, post-harvest care, processing, marketing and business management
- **2.4.3.5:** Ongoing advisory and oversight support, including systematization and dissemination of lessons learned

Outcome 2.5: Strengthened protected area network in target localities, filling ecosystem coverage gaps and responding to overall R2R management plans

261. There has been significant buy-in by local communities and organizations to the model of community-based protected areas (Community Conservation Areas), as reflected in the considerable number of CCAs established to date. This is in large part due to the principles of inclusivity, flexibility and participation on which the PA model is based, which allow community members to continue to use the areas in accordance with their traditions and needs.

262. The project will strengthen the management effectiveness of existing PAs in the target areas, and will assist local communities in establishing new areas where needed to fill ecosystem coverage gaps. This support will be coordinated with partner institutions working in the same localities, such as SPREP/PEBACC on Efate and Tanna (see section 3.1.2) in order to ensure harmonised criteria and commonality of message in interactions with local stakeholders.

263. The locations and approximate areas of the target PAs for creation and improved management are set out in Table 4. These proposals are as yet still indicative, given that the specifics in terms of locations, boundaries and management objectives will be defined in discussion with local landowners and other stakeholders through the participatory processes proposed under Outputs 2.5.1 and 2.5.2.

264. The sites have been indicatively proposed on the basis of their potential to contribute to the environmental integrity of the R2R landscapes in the target localities, taking into account not only their intrinsic biodiversity values but also their importance for the protection of flows of ecosystem goods and services across the landscape.

265. Additional review of the proposed location of these PAs will be carried out through the provincial-level PA prioritization processes proposed under Output 2.5.1, which will combine technical analyses with participatory discussions. Given the nature of the CCA model in Vanuatu, it is not possible or desirable to prioritise PAs exclusively on the basis of externally-defined criteria of global environmental importance; rather the approach aims to strike a negotiated balance between the *ad hoc* proposal of areas based on the interests of individual communities, and the prioritisation of sites on the basis of their importance for landscape-wide ecosystem goods and services, their national and global importance for conservation, and connectivity needs at sub- and supranational levels.

Outcome targets:

- 5,000ha increase in the area declared as CCAs and MPAs, defined together with local communities
- Increase in average Management Effectiveness Tracking Tool (METT) score from 31.9 to 85
- 30,000ha of buffer zones and corridors defined around and between the CCAs and MPAs

Output 2.5.1. Provincial and local PA prioritisation plans

266. The balance sought between the different prioritisation criteria set out above will be achieved through project support to the negotiated and participatory development of plans for PA prioritisation at provincial and (where possible and appropriate) island-specific level, as complements to the national prioritisation exercises to date.

Activities:

- **2.5.1.1: Review and analysis of technical bases for PA prioritization.** The final decisions on PA prioritisation and establishment will rest with local stakeholders, but the project will ensure that they have technical information on hand to assist their decision-making, such as the location of priority species, and the nature, magnitude and locations of environmental goods and services provided by the sites and ecosystems under consideration. This information will be generated through consultancies and/or service contracts with national or regional research centres.
- **2.5.1.2: Facilitation of participatory reviews at province and island levels of priorities for PA establishment,** resulting in the generation of maps and action plans: while emphasizing local ownership of the prioritisation process, project support will focus on ensuring that the stakeholders participating in the process have access to as much as possible of the information that they need on which to base the prioritisation, and on helping them to consider the information in a balanced manner taking into account technical considerations as well as the implications for different interest sectors.

Output 2.5.2. MPA and CCA agreements negotiated and signed by government and local communities, with corresponding mapping and demarcation

267. The project will provide advisory and facilitation support to local communities and the Government leading to the negotiation and signing of MPA and CCA agreements, as provided for under national PA legislation.

268. The proposed areas are shown in Table 4.

Table 4. Proposed increases in coverage of CCAs and MPAs as a result of the project

Target locality	Name description	Approx. area (ha)		METT scores	
		Current	Proposed additions	Baseline	Target
Aneityum	1. Mystery Island	10	-	52	85
	2. Central Aneityum (proposed)	-	2,000	1	85
	3. SE Mystery Island MPA (proposed)	-	600	1	85
Tanna Middle	4. Numusetu	10	-	37	85
	5. New terrestrial PA (proposed)	-	600	0	85

Bush	6. New MPA (proposed)	-	400	0	85
North Efate	7. Efate Land Management Area	1,800	-	24	85
	8. Tanoliu Marine CCAs (Mauta and Sanoa)	2	-	23	85
	9. JICA Lelepa	1,910	-	36	85
	10. Lelepa Island Tours	3	-	38	85
	11. New terrestrial PA (proposed)		600	0	85
South Pentecost	12. Bay Homo existing terrestrial CCA	4,277		24	85
	13. New terrestrial CCA (proposed)		800	0	85
Gaua	14. Lake Letas	5,826	-	21	85
Totals		13,838	5,000	18.4	85

Table 5. Target condition of all target PAs by the end of the project (based on GEF METT rating system)

Rating criterion	Target condition
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant)
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain
4. Protected area objectives: Is management undertaken according to agreed objectives?	2: The protected area has agreed objectives, but is only partially managed according to these objectives
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc
6. Protected area boundary demarcation: Is the boundary known and demarcated?	3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated
7. Management plan: Is there a management plan and is it being implemented?	3: A management plan exists and is being implemented
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	1: Yes

Rating criterion	Target condition
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	1: Yes
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	1: Yes
8. Regular work plan: Is there a regular work plan and is it being implemented	2: A regular work plan exists and many activities are implemented
9. Resource inventory: Do you have enough information to manage the area?	2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making
10. Protection systems: Are systems in place to control access/resource use in the protected area?	2: Protection systems are moderately effective in controlling access/resource use
11. Research: Is there a programme of management-orientated survey and research work?	3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs
12. Resource management: Is active resource management being undertaken?	2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed
13. Staff numbers: Are there enough people employed to manage the protected area?	3: Staff numbers are adequate for the management needs of the protected area
14. Staff training: Are staff adequately trained to fulfill management objectives?	3: Staff training and skills are aligned with the management needs of the protected area
15. Current budget: Is the current budget sufficient?	2: The available budget is acceptable but could be further improved to fully achieve effective management
16. Security of budget: Is the budget secure?	2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding
17. Management of budget: Is the budget managed to meet critical management needs?	2: Budget management is adequate but could be improved
18. Equipment: Is equipment sufficient for management needs?	2: There are equipment and facilities, but still some gaps that constrain management
19. Maintenance of equipment: Is equipment adequately maintained?	2: There is basic maintenance of equipment and facilities
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	2: There is an education and awareness programme but it only partly meets needs and could be improved
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	3: Adjacent land and water use planning fully takes into account the long term needs of the protected area

Rating criterion	Target condition
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	1: Yes
21b. Land and water planning for habitat conservation: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	1: Yes
21c. Land and water planning for habitat conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	1: Yes
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	1: Yes
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	1: Yes
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	1: Yes
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	3: There is a major flow of economic benefits to local communities from activities associated with the protected area
26. Monitoring and evaluation: Are	3: A good monitoring and evaluation system

Rating criterion	Target condition
management activities monitored against performance?	exists, is well implemented and used in adaptive management
27. Visitor facilities: Are visitor facilities adequate?	2: Visitor facilities and services are adequate for current levels of visitation but could be improved
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	3: Fees are collected and make a substantial contribution to the protected area and its environs
30. Condition of values: What is the condition of the important values of the protected area as compared to when it was first designated?	3: Biodiversity, ecological and cultural values are predominantly intact
30a: Condition of values: The assessment of the condition of values is based on research and/or monitoring	1: Yes
30b: Condition of values Specific management programmes are being implemented to address threats to biodiversity, ecological and cultural values	1: Yes
30c: Condition of values: Activities to maintain key biodiversity, ecological and cultural values are a routine part of park management	1: Yes

Activities:

- **2.5.2.1: Participatory multi-stakeholder discussion of PA proposals**, including the definition of PA objectives and planning of establishment processes. These discussions will take place at site-specific level following the prioritisation exercises referred to above.
- **2.5.2.2: Facilitation of drafting of CCA/MPA agreements:** the project will advise local stakeholders on the drafting of these agreements, and will cover the costs of workshops require to discuss them among local stakeholders.

Output 2.5.3. Buffer zones and corridors established between and around CCAs and MPAs

269. While the actions proposed under Outputs 2.2 and 2.3 will promote the sustainable management of the overall target landscapes, more specific management provisions may be required in areas in the immediate vicinity of the existing and proposed PAs in order help buffer them against external threats, or in areas between PAs in order to promote biological connectivity. In terrestrial areas, buffer zones may for example be important in reducing the risk of pasture encroachment into PAs, and so locally-defined norms there might prohibit the opening up of new pastures and require cattle to be tethered rather than graze freely; in marine areas, specific rules might be introduced on fishing quotas and practices in order to provide further protection for the fish populations on which the MPAs themselves are focused, in recognition of the biological porosity of the MPA boundaries.

270. The precise locations of these buffer zones and corridors, and the nature of the management provisions and norms applied in them, will be defined in parallel to the

landscape and PA planning processes described above. Subject to these processes, it is targeted that 30,000ha of buffer zones and corridors will be established, divided between the four target landscapes.

Activities:

- **2.5.3.1 Participatory multi-stakeholder definitions of buffer zones and corridors:** these planning processes will be integrated with the planning processes proposed at landscape level under Outcome 2.1, and at the level of CCAs and MPAs under Output 2.5.2

Output 2.5.4. International designations of PAs

271. In addition to the designation of PAs under the categories recognised in Vanuatu, the project will support the designation of selected areas under international systems, in order to raise their international profiles and thereby increase the potential for generating income through sustainable tourism. These will include:

- The nomination of the Bay Homo CCA on South Pentecost as a UNESCO World Heritage Site;
- The nomination of Gaua as a Geo Park, focusing on the active volcano and caldera lake in the centre of the island.

Activities

- **2.5.4.1:** Compilation of existing technical information
- **2.5.4.2:** Consultations with local communities leading to their formal endorsement of the applications
- **2.5.4.3:** Drafting and submission of applications

Output 2.5.5. Management plans for each PA, harmonized with provisions of overall landscape management plans

272. The project will support the participatory formulation of management plans for each of the target PAs (both existing PAs and new PAs to be established through the project). These will set out key issues including management objectives, management strategies, internal zoning, resource needs, organizational frameworks and financing.

273. An important incremental aspect of this support will be the reflection of landscape-wide considerations in the provisions for management and internal zoning of these areas, such as their possible importance for upstream/downstream hydrological processes affecting other elements of the landscape, their importance as elements of intra- and interisland biological connectivity, and their implications for island-wide priorities for economic development.

Activities:

- **2.5.5.1:** Technical studies to inform PA design and management
- **2.5.5.2:** Participatory definition of PA design, management prescription and regulations
- **2.5.5.3:** Drafting and participatory validation of maps, management plans and regulations

Output 2.5.6. Local PA management committees, functioning with capacities for adaptive management

274. In accordance with the provisions of the management plans to be developed under Output 2.5.3, the project will support the establishment of organizational structures

required to sustain the management of the PAs and to ensure the adequate representation of stakeholder interests. Where possible these structures will be constituted by, or build upon, existing social structures in the communities in question, in order to maximize the potential for their validity and social sustainability; they may, however, require some modification in order ensure that they are relevant to the specific issue of PA management, that their spatial coverage corresponds to that of the PA in question, and that they adequately and equitably represent the interests of all PA stakeholders.

Activities:

- **2.5.6.1:** Capacity development for PA management, including establishment/strengthening of local PA management entities and monitoring systems
- **2.5.6.2:** Investment in physical infrastructure and equipment, as defined in participatory management plans
- **2.5.6.3:** Ongoing advisory and advisory support

Outcome 2.6: Sustainable resource management and PA management supported by sustainable financing

275. The project will use a two-pronged approach to ensure that the PAs in the target areas have access to sufficient financial resources to guarantee their sustainable management and protection, benefiting local communities while at the same time ensuring the effective conservation of their environmental values of global importance. On the one hand, plans, agreements and mechanisms will be developed to ensure that an appropriate proportion of income from tourism visits (within the framework of the ecotourism plans and initiatives to be promoted under Outputs 2.4.1 and 2.4.2 above) is reinvested by local tourism businesses into the PAs that they use; and on the other, the project will support the establishment of mechanisms and capacities for taking advantage of external sources of income.

276. There is major potential for external sources of income to generate socially-beneficial outcomes and to promote environmental sustainability on the target islands, but this is not being realised due to the lack of appropriate mechanisms for generating, managing and channelling such income (see Section 1.3.3 on Barriers). The project will focus in particular on generating and channelling income from the tourism sector (responding to the strengthened policy stance on this issue under Output 1.1.1 and the corresponding commitments under Output 1.3.1), and also potentially through REDD+ schemes. These mechanisms will be managed in a participatory, transparent and efficient manner in support of initiatives specifically targeted at generating social and environmental benefits. It will generate external sources of income.

277. There is potential for PES funds to generate a range of community-level benefits on the target islands. In reflection of the integrated, R2R vision of the project, artificial separations will not be imposed between mechanisms for funding the generation of social and environmental benefits, or for supporting PA management and environmental management in the wider landscape. Social benefits may be generated, for example, through support to the establishment of fresh food markets, nutritional programs, improved tourism products, waste management programs, and transportation for fresh foods to access markets. It is anticipated that environmental benefits will be generated through:

- Investment in the improved management of coastal and marine ecosystems of the island, which, especially on Aneityum, constitute the main draw for cruise ship tourists (this support may include, for example, signage highlighting the environmental values of the area and explaining rules such as avoidance of littering and of touching areas of live coral, environmentally sensitive toilet facilities, litter bins and other waste management infrastructure);
- Investment in environmental restoration: again, this is especially an issue on Aneityum, where the ongoing degradation of middle-altitude areas of the island constitutes a major source of sediment input into island's coral reefs.

Outcome targets:

- \$20,000/year between all target localities

Output 2.6.1: PA-specific financial management and investment plans

278. The project will work with local tourism businesses (whether community-managed or owned and run by urban-based actors in association with local communities) to ensure that these reinvest income in the maintenance and improvement of the PAs that they use, for example, through waste management, path clearance, or the establishment of facilities such as interpretation centres and signage. This support will involve a combination of awareness raising regarding the importance of these investments for the long term success of their businesses, and advisory support in order to allow these business to provide adequately for these investments in their business plans.

Activities:

- **2.6.1.1:** Analysis of financial requirements for PA management
- **2.6.1.2:** Awareness raising and training on financial contributions by local businesses, resulting in negotiation of commitments
- **2.6.1.3:** Support to formulation of financial sustainability plans for each PA

Output 2.6.2: Local-level financial mechanisms in support of PA management and landscape restoration

279. On Aneityum and Efate, it is proposed that the project will partner with the NGO Live and Learn in developing socially appropriate and sustainable schemes for generating financial resources, and channelling them in support of resource management initiatives, managed by local people, which promote positive flows of ecosystem goods and services in accordance with R2R principles, within the framework of the Nakau Programme (see Box 5).

Box 5. The Nakau Programme

The Nakau Programme (<http://www.nakau.org/>) is a rainforest conservation financing programme, focusing on community-based forest protection and enhancement and sustainable development, supplying carbon offsets and Habitat Hectare units to buyers seeking carbon certification, brand alignment with rainforest protection or those wanting to fund disciplined rainforest protection outcomes. In the Pacific, it currently works in Vanuatu (where a successful pilot has been established at Loru Community Conservation Area on Espiritu Santo island), Fiji and the Solomon Islands.

Under the programme, PES units are created by implementing measurable and additional forest protection/enhancement outcomes. The purpose of the programme is to provide a financing mechanism to cover the costs of environmental management activities and addressing any landowner opportunity costs where relevant. It operates through the implementation of geographically defined projects with specific forest protection and/or enhancement goals. Projects

are implemented by applying one or more detailed methodologies that are validated to an international PES standard.

At the heart of the programme's methodology is a commitment to optimising and sustaining the benefits flowing to indigenous forest owners. All projects in the Programme are owned by the indigenous landowners; however, PES systems are new, highly complex and carry risks. The Programme takes a community development partnership approach, based on the principle that a model where an indigenous community is required to accept all responsibilities for a project (including the risks of failure) is neither fair nor sustainable: fair and transparent partnerships involving mutually beneficial collaboration between local and external stakeholders aim to manage the risks of failure, and optimize the conditions required to make PES projects work and endure.

Projects are administered and managed through a partnership between landowners and an approved Project Coordinator, who provides agreed services (transparently budgeted) to the project, subject to binding contracts with the Project Owners. The range of services provided by the Project Coordinator is determined by the capacity of the particular Project Owner group to take on such tasks by themselves, which will change through time. The partnership is designed to optimize project outcomes by ensuring adequate technical capacity is available to produce the product (PES units), at a fair price. After costs are subtracted, all net profits from the sale of PES units flow to the indigenous Project Owners.

Activities such as relationships with international buyers, project marketing, reporting and verification have the support of the Coordinator and Nakau Programme.

Once payments reach the Project Owners, a Community Benefit Sharing system is triggered, which is sufficiently flexible to accommodate local differences in capacity, preferences, needs and opportunities. However, specific conditions on benefit sharing arrangements have been identified which provide safeguards to ensure benefit sharing is equitable, and to mitigate risks that cash benefits lead to un-intended negative social outcomes.

280. Live and Learn is currently working on Aneityum within the framework of the Pacific Risk Resilience Program: it therefore already has contacts and activities on the ground, and so would be well-placed to work as a project partner, using GEF resources to develop and implement restoration-focused PES initiatives (such a partnership would be subject to confirmation in accordance with GEF, FAO and GoV rules, and would be overseen by the PMU).

Activities:

- **2.6.2.1:** Awareness raising of community members on PES schemes and identification of opportunities
- **2.6.2.2:** Negotiation with participating communities on the functioning of the PES schemes
- **2.6.2.3:** Capacity development of participating communities
- **2.6.2.4:** Marketing and negotiations with international PES partners
- **2.6.2.5:** Ongoing advisory and oversight support

Component 3: Knowledge management

Outcome 3.1: Best practices and lessons learned are systematized and disseminated

Outcome target:

- Decision-makers in key institutions have access to best practices and lessons learned as being useful

Output 3.1.1. Mechanisms for systematisation, dissemination and awareness raising

281. The integrated, participatory approach of the project to the sustainable management of natural resources and the conservation of global environmental values will be particularly innovative and as such will have the potential to act as a “game changer” throughout the country. Significant emphasis will therefore be placed on effective systematisation and dissemination of the experiences generated through the project, to a range of audiences. These will include policy- and decision-makers in Government institutions and NGOs; national and regional research and academic institutions (such as SPC and USP), providing the opportunity to influence the Ni-Vanuatu students studying there, many of whom will subsequently be incorporated into national institutions; and national schools and colleges, especially those with an agricultural focus such as the Vanuatu Agriculture College and Matevulu College on Espiritu Santo island, and Tagabe Agriculture School on Efate. Lessons learnt will also be disseminated to the team of the Regional R2R Programme support project, for subsequent dissemination to other member projects of the Programme.

282. The project will also invest in information sharing at a regional level, within the framework of the multi-focal peer to peer scientific and technical network for knowledge sharing and training (PacIW:LEARN) to be established through the regional R2R programme, and in accordance with Objective 3 of the GEF International Waters focal area on support to foundational capacity building, portfolio learning, and targeted research needs. This will build on the baseline PacIWRM project's successful delivery of distance learning and twinning for IWRM capacity development.

283. The project team, in collaboration with local stakeholders and national and provincial institutions, will systematize its experiences with the application of the R2R approach as a means of reducing upstream-downstream impacts on coastal and marine ecosystems, and with the application of community-based approaches to protected areas (through the national model of MPAs, see Output 2.5) and governance (see output 2.1.2 and Box 3 on community-based governance of marine resources). This systematization will include cost aspects, in order for these be considered when determining the replication potential of the experiences. These experiences will be communicated to the regional R2R programme and its constituent national and regional projects, in accordance with protocols to be confirmed at the start of the project with UNDP, as leader of the regional programme: initial agreement on this information sharing has been reached during the PPG phase. At the same time, the project team will establish mechanisms and protocols for receiving inputs from the R2R programme in terms of lessons learnt through others of its constituent projects, for communicating these inputs to national partners and for incorporating them into project management decisions and strategies.

Activities:

- **3.1.1.1:** Formulation of protocols and mechanisms for systematization and dissemination
- **3.1.1.2:** Training of project staff and partners on systematization
- **3.1.1.3:** Generation and dissemination of documents and other media, on best practices and lessons learned
- **3.1.1.4:** Promotion of incorporation of project experiences into educational curricula.

Outcome 3.2: Decision-making and planning are guided by information on trends in ecosystem conditions

Outcome targets:

- 100% of lease application determinations in target localities take into account monitoring data on ecosystem conditions
- 100% of EIAs in the target localities take into account monitoring data on ecosystem conditions

Output 3.2.1. Systems in provincial government offices for management of information on ecosystem conditions and trends, feeding data to local organisations in target localities

284. The effectiveness and relevance of the planning and decision-making processes which it is proposed that the project will strengthen in provincial government offices will be determined to a large extent by the access of these offices to accurate and useful information, and their abilities to understand, manage and use it. The project will invest in designing and establishing information management systems tailored to the needs and conditions in each of the provincial offices corresponding to the project's principal target localities (on Efate, Tanna and Pentecost); these will be designed in full consultation with the staff member of the offices in question and will take into account practical considerations including the numbers and educational profiles of the staff who may use the systems, as well as the reliability of their access to hardware and to software support, and electricity supplies. The information to be included in the systems will be confirmed in consultation with the staff members, taking into account its relevance for the integrated land management planning and PA prioritisation processes in which the provincial governments will be involved; it is likely to include aspects such as soil types, topography, climate (including climate change) and erosion potential; vegetation types and biodiversity values; and socioeconomic variables such as population density and trends.

Activities:

- **3.2.1.1:** Design and establishment of information management systems
- **3.2.1.2:** Capacity development in provincial government offices and local organizations for maintenance and use of information management systems

Output 3.2.2: Functioning Measurement, Reporting and Verification (MRV) unit in the Department of Forestry

285. The project will build upon previous investments (e.g. GIZ support to SPC) in strengthening capacities for MRV, by supporting the establishment of a specific MRV unit in the Department of Forestry. Project support will include the provision of hardware and software, training for Government staff, and payment over the first 4 years of the project of the salary of a recent graduate to get the MRV system up and running, who will subsequently be incorporated as a Government-funded staff member.

Activities:

- **3.2.2.1:** Appointment of MRV specialist
- **3.2.2.2:** Procurement and installation of hardware and software
- **3.2.2.3:** Training of Government staff

Outcome 3.3: Project management is subject to effective M&E that feeds back into adaptive management decisions.

286. The project M&E system will be set up in the first quarter of the project, and will be managed by a dedicated M&E specialist on the project team who will ensure that pending baseline values indicated in the project's results framework are measured within the first

half of project year 1, and that subsequent measurements of all project indicators are made on time and included into the project's internal decision support system.

287. The results of indicator measurements will be reported on a regular basis to the Regional R2R Programme support project, in order to allow that project to report on overall programme progress.

Output 3.3.1: Functioning project M&E system

Activities:

- **3.3.3.1:** Inception workshop
- **3.3.3.2:** Design and establishment of M&E system
- **3.3.3.3:** Baseline studies to fill in pending baseline values for indicators
- **3.3.3.4:** Ongoing measurement of indicators and feed in to adaptive management

Global environmental benefits

288. The project will generate Global Environmental Benefits (GEBs) in the following GEF focal areas:

1) Biodiversity (GEF5 Objective 1)

289. The project will deliver biodiversity benefits through expanding and strengthening the network of small community-managed protected areas in the target localities, as integral elements of sustainably managed landscapes capable of yielding multiple other environmental benefits. Within the context of increasing pressures of degradation and fragmentation affecting natural ecosystems, these PAs will play vital roles as refugia and for biological connectivity. The proposed central Aneityum PA, for example, will cover much of the island's remaining intact natural vegetation, which has high levels of endemism (see paragraph 108) and is under increasing threat from extraction, due in part to the market among cruise ship tourists for handicrafts; while the Nusumetu PA on Tanna is one of the few remaining areas of forest in the Middle Bush Area, and is thought to contain populations of the IUCN Vulnerable Collared Petrel, *Pterodroma brevipes* alongside a number of other island endemic species (see paragraphs 116-117). Further biodiversity benefits will be generated through sustainable land management in the productive landscapes adjoining or draining into such priority ecosystems (see below): this will serve to reduce sediment load into fragile coastal and marine ecosystems including coral reefs and seagrass beds, and to stabilise processes of land use change which are leading to encroachment on areas of natural vegetation.

290. In marine areas, the project's focus on the establishment of community-managed MPAs has significant potential for conservation of fish population. For example, studies of the Nguna-Pele marine protected area in North Efate have revealed that both permanent and periodic closures had a higher biomass of indicator fish inside than outside the reserve. This suggests that small-scale, village-based reserves are effective resource management tools, and that opening a reserve temporarily for harvest according to community needs, may be a practice compatible with conservation goals⁶³.

⁶³ The Status of Coral Reefs in Vanuatu in 2007. Jason J.J. Raubani Acting Principal Fisheries Officer, Vanuatu Fisheries Department, Ministry of Agriculture, Quarantine, Forestry & Fisheries. In Southwest Pacific Status of Coral Reefs Report

2) Land Degradation (GEF5 Objective 3)

291. Land degradation benefits will be generated through the promotion of sustainable production systems and the active restoration of degraded areas. Increases in the tree content of agriculture and livestock systems, and the use of cover crops, will serve to reduce soil erosion, promote nutrient recycling and increase production, contributing to the long-term maintenance of the productive potential of the land and the stability and resilience of the productive landscape as a whole.

292. Restoration activities will largely focus on open-access areas and areas with high levels of degradation, where the recovery of the capacity of the ecosystem to provide environmental goods and services is beyond the scope of individual farmers. As has been shown in Aneityum (see Box 4) it is possible to halt and reverse historical processes of degradation through well-planned restoration actions that mimic and accelerate natural seral stages of vegetation development, beginning with hardy grasses and moving to shrubs and eventually trees once sufficient soil has accumulated to support these.

293. Again the ridge to reef concept is fundamental to the SLM benefits to be delivered by the project, recognising that the sustainability of the management of individual land units is dependent on the appropriate management of the landscape as a whole.

3) Climate change mitigation

294. Climate change benefits will be achieved through a combination of avoided deforestation and increased capture. Avoided deforestation will result from the establishment of small terrestrial PAs, the stabilisation of land use change processes at the level of the landscape as a whole, and the promotion of solar driers which will reduce wood fuel consumption; while increased carbon capture will result from increases in the proportions of trees in agricultural and livestock production systems, and the restoration of degraded areas through the active planting of trees and assisted natural regeneration following initial site stabilisation.

295. It is estimated that the project will result in net avoided emissions benefits from avoided deforestation of 958,297tCO_{2eq}, net capture from restoration and reforestation of 153,329tCO_{2eq}, net capture from agroforestry and agrosylvopastoral systems of 2,005,706tCO_{2eq} and avoided emissions from fuelwood used due to the promotion of solar driers of 517tCO_{2eq}. The calculations on which these figures are based are shown in Appendix 6.

4) International waters

296. Benefits for international waters will be achieved through the application of principles of integrated coastal zone management (ICZM) to the coastal and marine areas into which the target R2R landscapes drain. As with the terrestrial portions of the R2R landscapes, this approach will involve a combination of small-scale community-managed PAs integrated within a matrix of coastal and seascapes that are subject to active management and extraction in accordance with community-based norms and regulations (see Box 3). This will result in improvements in the health of coastal and marine ecosystems including coral reefs, seagrass beds and mangroves, yielding additional related benefits in terms of fisheries productivity and climate change resilience.

2007, CRISP/USP/GCRMN (<https://www.cbd.int/doc/meetings/mar/rwebsa-wspac-01/other/rwebsa-wspac-01-fiji-coral-reefs-en.pdf>)

5) Sustainable Forest Management (GEF5 Objectives 1 and 2)

297. The project will result in improved forest management over an estimated 81,000ha, with corresponding benefits in terms of avoided emissions of 958,297tCO₂eq, largely due to the application of community-based governance frameworks on the extraction of forest products and the clearance of forests. This will be supported by PES and carbon payment schemes as explained under Outcome 2.4.

Table 6. Global environmental benefits reported in results matrix and tracking tools

Type of benefit	Amount	GEF Focal area
Lifetime direct GHG emission avoided	647,410 tCO ₂ eq	CC/SFM
Lifetime indirect GHG emission avoided	622,048 tCO ₂ eq	CC/SFM
Lifetime direct carbon sequestration	1,623,821 tCO ₂ eq	CC/SFM
Lifetime indirect carbon sequestration	1,520,867 tCO ₂ eq	CC/SFM
Area in target localities covered by integrated landscape/seascape management plans developed and implemented by local landowners	100,000ha	LD
increase in area over which sustainable hillside farming/agroforestry practices are applied	6,625ha	LD/SFM
Increase in area over which sustainable hillside ranching/agrosilvopastoral practices are applied	600ha	LD/SFM
Area of degraded lands subject to restoration	800ha	LD
Increase in area over which community-based fisheries regulations are effectively applied	500ha	IW
increase in area coverage of PAs (Community Conservation Areas and Marine Protected Areas) in target localities	5,000ha	BD
Area of buffer zones and corridors defined for special management in the target localities	30,000ha	BD
Increase in PA management effectiveness ratings	From 18.4 to 85 in 8 existing and 6 new PAs	BD
Increase in reef health indices	10%	BD

1.4.4 Assumptions

Commitment and political will among key institutional and corporate stakeholders

298. Continuance of commitment and political will is a key assumption for the achievement of a number of the project's outcomes:

- Mainstreaming of R2R approaches into sector development policies (Outcome 1.1): considerations of environmental sustainability are mentioned to some degree in all of the policy instruments described in Section 1.1.10 above, providing a solid basis for the strengthening and broadening of this aspects to include the integrated R2R approach promoted by the project; the translation of this into reality will, however, depend on readiness among policy-makers to consider environmental issues on a continuous basis and in some cases to accept trade-offs between ambitious sector development targets and the need to ensure environmental sustainability. This is

particularly the case in the livestock and tourism sectors, which have large potential for impacts due to their ambitious growth targets.

- Strengthening planning and decision-making instruments (Outcome 1.2): while a solid legal basis exists for promoting environmental sustainability through the application of planning and decision-making instruments, their effective application in practice depends on continued commitment and political will among all those involved, and the functioning of mechanisms for stakeholder participation and oversight, for example the Land Management Planning Committee.
- Channelling private sector resources in support of environmental sustainability (Outcome 1.3): this depends on a combination of political will in Government to require private sector actors (particularly the cruise industry) to invest in environmental sustainability, and commitments among the cruise ship companies to maintaining their corporate reputations through corporate environmental and social responsibility programmes.

Commitment and governance at local levels

299. The success of the project's activities under Component is dependent on "buy-in" and commitment among stakeholders at individual and community levels in the target areas. It is necessary for community members to be aware of the nature, magnitude and environmental implications of resource management issues, to be receptive to messages regarding these issues, and to be willing to take actions accordingly. Given the specific approach of this project, another important assumption is that different stakeholder groups will be willing to enter into constructive dialogue with each other, including different clans or villages but also, more significantly, actors with different sociocultural backgrounds and levels of access to political and economic power (such as community members and external investors). The project will play a vital role in ensuring that these assumptions are realised, through the design and implementation of culturally-appropriate strategies for awareness raising and information flow (under Component 3) and also through the active facilitation of multi-stakeholder dialogue under Outcome 2.1.

300. The effectiveness of the application of the project's approach will also be dependent on the existence of favourable governance conditions in the target provinces and communities. In particular, social structures must exist to permit, or be sufficiently flexible to allow, the consideration of the interests of all sectors of society in decisions related to environmental management, while maintaining cultural traditions; and to allow the costs and benefits associated with resource management strategies and environmental decisions to be distributed in an equitable manner among different sectors in such a way as to optimize social sustainability and avoid unnecessary negative social impacts.

Favourable economic, demographic and climatic conditions

301. The project's approach is intended to be adaptive in nature, with capacities strengthened at all levels to enable the target institutions and communities to respond creatively and effectively to emerging threats, regarding which some uncertainty exists. Land use planning and farm management practices, for example, should be developed in such a way as to be able to cope with future demographic growth, as well as the additional stresses posed by climate change. These strategies will be developed on the basis of certain assumptions regarding the nature and magnitude of these changes, and beyond these "coping ranges" alternatives or further adjustments to approach may be required. The

mechanisms for monitoring and information flow proposed under Component 3 will allow the project team and stakeholders to identify the status of these variables in relation to the designed coping ranges of the project's strategies, and to take action accordingly.

1.4.5 Stakeholder consultation and engagement

302. The project will work closely in consultation and coordination with a wide range of stakeholders namely local communities, provincial and national government agencies and departments, civil society organizations, national and international organizations, regional initiatives, university and research centres and private sector in Vanuatu.

303. During the PPG phase, field visits and focus group discussions were held in each of the target areas in order to identify key stakeholders, consult them on project design, and obtain key baseline information. The project will ensure the participation and involvement of local people who have been consulted and apprised on the project and their role in the implementation of the project. A Project Steering Committee was constituted and consulted to approve and endorse the project sites and to guide and support the project document preparation.

304. A multi-stakeholder inception workshop will be organized during the initial stages of the implementation phase of the project, to provide all the key and relevant stakeholders with updated information on the modus operandi of the project, to confirm the respective roles of different stakeholders, to set priorities and to refine the project's work plan.

305. Stakeholder participation in project implementation will further be ensured through the establishment of Local Advisory Committees (LACs) in each of the target provinces, allowing key local representatives to advise the Local Conservation Officers on project activities at local level. It is foreseen that they will be chaired and convened by the Provincial Government and will also include representatives from the local Council of Chiefs, women's groups, sector-specific community-based organizations (such as fishers), local NGOs and local level representatives from key institutions such as MLNR, MAQFF and MTTCI. Their composition and functioning will be determined by local stakeholders, under the oversight of the Provincial Government and local Council of Chiefs, with advice from the Local Conservation Officer, in order to ensure that the interests of different stakeholder groups are represented in a balanced manner. In addition to providing a forum for discussion and advice on project activities, and for coordination between the different institutions and organizations participating in the project at local level, the LACs will be responsible for approving the island-specific annual work plans of the project. The Provincial Government representative participating in the meetings of each LAC will be responsible for communicating the results to the meetings of the national level PSC.

306. Vanuatu has in place a number of government and/or multi-stakeholder bodies coordinating activities on biodiversity, climate change, land degradation and land-use and PA management. The committees include those dealing with the following: National Adaptation Programme of Action (NAPA) Coordination Committee, National Biodiversity Strategy and Action Plan (NBSAP) Review Committee, CBD Report Coordination Committee, UNFCCC National Communications Coordinating Committee, NCSA Committee, as well as specialised advisory and co-ordination committees within the departments that will be joint executing agencies for the project. Many of these committees have common memberships and some are more active than others depending on the task at hand. These existing bodies would be the primary mechanisms used to co-ordinate activities in the country. These committees will

be the basis for the selection of the project steering and oversight committee so that there will be a linkage between all. Core members of these committees are representatives of the main executing departments and the project will ensure that the right officials and individuals are selected to represent agencies on the project steering committee and that there is continuity of personnel in such membership. They will be regularly briefed about project activities and members of these bodies would be invited to participate in project steering committees. Members of these bodies would also be targeted for capacity building activities, because these existing institutional arrangements are weak.

Table 7. Key stakeholders

Stakeholder	Roles in the Project
Local communities	
Local communities using resources from project sites and PAs, including subsistence and semi-commercial farmers, fishers and NTFP users,	<ul style="list-style-type: none"> • Main project beneficiaries and partners in livelihood activities • Collaborators in implementing project activities • Support for developing strategies for sustainable resource management • Recipients of trainings, awareness-raising and participants in conservation activities
Customary land owners	<ul style="list-style-type: none"> • Partners in conservation through Community Conservation Area (CCA) Agreements
Local people living adjacent to PAs and people involved currently in tourism activities	<ul style="list-style-type: none"> • Recipients of trainings. • Target group of project activities (e.g. job creation by ecotourism, alternate livelihood, etc.)
The general public	<ul style="list-style-type: none"> • Recipients of awareness raising and participants in public education activities
Government of Vanuatu	
Ministry for Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management; Ministry of Lands and Natural Resources; Ministry of Agriculture, Quarantine, Forestry and Fisheries;	<ul style="list-style-type: none"> • Main implementation partners and responsible for day to day execution, management, coordination and monitoring of the SLM, SFM, agriculture related and sylvo-pastoral activities • Collaboration in establishment of community nurseries, distribution of seedlings and related activities • Recipients of training • Collaboration in establishment of demonstration site/s and related training activities. • Support with policy in strengthening PAs, PA network system, and establishment of mechanisms for sustainable financing of PAs • National government oversight of project implementation • Support for project management/oversight and M&E
Extension staff in agriculture, forestry and fisheries departments and MLNR Environment Department	<ul style="list-style-type: none"> • Project beneficiaries through the training and capacity building programmes. • Project partners providing implementation support to the project at community level
Ministry of Finance	<ul style="list-style-type: none"> • Partner in establishing and operating the PA financing mechanisms. • Technical support for Government co-financing arrangements
MTTCI	<ul style="list-style-type: none"> • Tourism and livelihood linked microenterprises promotion • Co-financing partner.
Ministry of Justice	<ul style="list-style-type: none"> • Legal support in realizing Community Conservation Area agreements and Marine Protected Areas and other PAs and further policy legislation
Provincial Governments	<ul style="list-style-type: none"> • Important partner in ensuring awareness and community ownership

Stakeholder	Roles in the Project
	<ul style="list-style-type: none"> and on the project • Active partner in supporting implementation of project activities through existing provincial institutional structures • Implementing trainings and workshops at site level • Member of project implementation committees
Regional Development Training Centres	<ul style="list-style-type: none"> • Support in conducting trainings and capacity building for all stakeholders
UN REDD+ program	<ul style="list-style-type: none"> • Collaboration in undertaking assessment and monitoring • Continuation of monitoring beyond the term of existing planned activities
Civil Society and Non- Governmental Organizations, academic institutions and Research Organizations	
Civil Society and Non-Governmental Organizations – VANGO	<ul style="list-style-type: none"> • As project partners particularly at community level, providing support in community mobilization, building capacities, dissemination of knowledge and in implementation of project activities during and sustaining the same beyond project tenure. • As project partners and beneficiaries through capacity development and other trainings • Awareness raising in conservation and PA management and in communication of project activities. • Project partner: Extending expertise in SFM and SLM.
Australian Centre for International Agricultural Research	<ul style="list-style-type: none"> • Project partner • Collaboration in development and distribution of training materials
University of South Pacific	<ul style="list-style-type: none"> • Support in developing curriculum and training material and pictorial tool kits • Providing support in implementing training programmes and in awareness raising
International NGOs	
Live and Learn	<ul style="list-style-type: none"> • Collaboration in implementation of forest carbon pilot project and subsequent activities
WWF	<ul style="list-style-type: none"> • Collaboration in extending savings clubs towards income generating activities
World Vision	<ul style="list-style-type: none"> • Collaboration in implementation of livelihood activities in demonstration sites in project areas in collaboration with Integrated Community Development Program
IUCN	<ul style="list-style-type: none"> • Possible collaboration through MARSH project in development of management plans, biodiversity studies and carbon monitoring. • Mangrove ecosystem management and rehabilitation for enhanced livelihoods of community and climate change adaptation through MESCAL project
Bilateral, multilateral and regional organizations	
FAO	<ul style="list-style-type: none"> • GEF Executing Agency. Responsible for providing technical assistance and overall management and supervision of the project implementation, management, oversight and funding. • Support for project M&E. • Enhancing understanding related to REDD+ (forest carbon management) R2R and capacity development for MRV • Providing facilitation services and technical assistance as support to VPA processes

Stakeholder	Roles in the Project
	<ul style="list-style-type: none"> Reducing illegal logging by facilitating sustainable forest harvesting practices and enhancing natural forestry management Providing technical support in sustainable land management Development and dissemination of lessons learned
The Pacific Community (SPC)	<ul style="list-style-type: none"> Provision of technical services and capacity building related to improvement forest management and in SFM practices for FSC certification Producing extension materials for SFM Co-financing partner
SOPAC	<ul style="list-style-type: none"> GIS mapping through GIZ
Australian Aid	<ul style="list-style-type: none"> Support in developing agroforestry systems for smallholders, with tree species for future commercial harvest at an early age Development of value-adding small scale industries for local communities from both timber and non-timber forest products Co-financing partner
European Union	<ul style="list-style-type: none"> Co-financing partner.
NZAid	<ul style="list-style-type: none"> Tree nurseries and forestry training through Department of Forestry Provide vocational training of rural youth through the Vanuatu Rural Development Training Centres Association Co-financing partner.
Secretariat for Pacific Regional Environment Programme (SPREP)	<ul style="list-style-type: none"> Partner in implementation of project activities Potential collaboration with technical support
Private Sector Organizations	
Private sector	<ul style="list-style-type: none"> Project partners where land-use developments are of a commercial nature and potential co-financing partners through PA sponsorship. Key actors in adding value to both forest based and agricultural and marine products. Vital to generating sustainable income to local communities as project partners

1.4.6 Lessons learned

307. Key lessons learned from prior initiatives, that are reflected in project design, include the following:

- The social sustainability of initiatives affecting natural resource management and community organization is dependent on involving traditional authorities (national and island-specific councils of chiefs) at all stages in the process, from formulation to implementation. Without their buy-in, resource management decisions at landscape level have limited validity, and policy influencing initiatives have limited credibility.
- At the same time, traditional authorities may not in all cases adequately take into account the interests of all community members, and it may therefore be necessary to establish complementary gender-sensitive mechanisms to ensure adequate participation and representation of marginalized stakeholders.
- Although under law land rights are vested in specific customary landowners, in reality a wide range of other stakeholders may have valid interests, recognised informally within the communities in question, in the management and use of the natural resources on any particular area of land. Management decisions must therefore

consider and involve these other stakeholders as well.

- While there is a high level of interest among stakeholders over much of the country in the establishment of protected areas, the effective implementation of controls on extractive activities (such as the collection of trochus shells and sea cucumbers) can easily be undermined by the emergence of new marketing opportunities; it is therefore not safe to rely solely on expressions of goodwill and commitment, but also to ensure that stakeholders have access to economic alternatives.

308. Of particular relevance are lessons learned from the previous GEF SLM project in Vanuatu (GEF ID 3502: "Capacity Building and Mainstreaming for Sustainable Land Management in Vanuatu"), in relation to institutional and capacity issues, which have been taken into account in the design of this project, including the following⁶⁴:

- The concept promoted by the project (in that case SLM, in this case R2R) should not be perceived as a project but needs to be integral (as a set of principles) within government policy delivery;
- There needs to be better policy structure and focus within GoV to make project outputs work better, linked to a review of customary rights and mapping of customary boundaries and lease arrangements.
- There needs to be good coordination and awareness of key issues between departments, implemented through a robust National Steering Committee.
- Local projects require community ownership with effective relations between the project and the local chief, and clear arrangements for community engagement.
- Particular attention needs to be given to commitment and leadership from senior government officials, setting up a well-defined and accepted project inception strategy to guide implementation, recruitment of qualified and experienced project management staff with probation conditions for the inception period, and adequate incentives to ensure government staff participation.

309. As proposed under Component 3, the project will establish mechanisms for the incorporation into management decisions during its implementation phase of lessons learned from other past or ongoing initiatives, including the following:

- FAO's experiences with the current GEF-FAO forestry and protected areas management project.
- The existing GEF-FAO project on forestry and protected areas management in Fiji, Samoa, Vanuatu and Niue, especially the activities in Samoa where a very similar approach to community-based management of protected areas is being developed.
- The SPC/GIZ Regional Project "Climate Protection through Forest Conservation in Pacific Island Countries" which is being implemented in the Pacific countries.

1.4.7 Alignment and strategic fit

a) Alignment with national development goals and policies

310. The project is aligned with the following policy and planning instruments:

⁶⁴ Terminal Evaluation Report of the Sustainable Land Management Project, Vanuatu. Jonathan McCue (CTL Consult Ltd), March 2012.

- **First National Conservation Strategy (1993):** this prioritises the improvement of environmental education and awareness, legislation and law enforcement, the strengthening of environmental institutions, the preservation of natural resources and cultural places, and the efficient use of natural resources. The project will contribute to all of these priorities through its integrated approach which includes the strengthening of institutional capacities at all levels, improved governance, and the combination of conservation with resource use and the consideration of social and cultural issues.
- **Priorities and Action Agenda for Vanuatu 2006-2015:** in addition to the improvement and increased production of the agriculture, forestry and fisheries sectors, the PAA highlighted the importance of environment and disaster management, under the responsibility of the DEPC and with complementary involvement of the Departments of Agriculture, Forestry and Fisheries.
- **Overarching Productive Sector Policy (2012-2017):** the OPSP recognises the importance of biodiversity and ecosystem services, and in this regard encourages communities to support the establishment of “Community Conservation Areas”, as provided for under the Environmental Protection Act [Cap 283].
- **Vanuatu Forest Policy (2013-2023):** this calls for greater involvement of local communities in forest management as well as in the protection and conservation of important ecosystems. The approach proposed in the project is entirely consistent with the policy and will contribute to some of its aims. Furthermore, it follows the proposed public-landowner collaboration model with the Forestry Department providing trees and advice for forest restoration and the establishment of CCAs, while local communities invest their time in management activities and are ultimately left in control of their resources. The policy also lists the following objectives that are directly relevant to this project; integration of climate change mitigation issues into forestry sector planning and activities, establishment and management of community and forest conservation areas for carbon storage, reduction of forest degradation and related emissions from natural forests by applying principles of SFM, and establishment of a national forest carbon monitoring system for MRV of forest carbon stock changes.

b) Alignment with NBSAP, NAP and NAPA

311. Biodiversity: the project will address a number of issues raised in Vanuatu’s NBSAP (1999) and Third National Report to the CBD (2006). Specifically, the need for watershed management, management of natural resources and conservation of significant species and places will be covered by this project. It will also address the two challenges raised in these documents about the need to conserve biological resources to support sustainable livelihoods, local food security and healthcare, as well as the need for more consideration of biodiversity in agricultural activities. The above are also consistent with Vanuatu’s National Biodiversity Conservation Strategy (the national strategy to implement the NBSAP).

312. Land degradation: the project will focus on addressing the major land degradation threats identified in the Third National Report to UNCCD (2007), namely the lack of land use planning, increasing human population, unsustainable agriculture, and urban development practices, through the application of an integrated approach in the target areas that will lead to future replication at a larger scale.

313. **Climate change:** Vanuatu's national communication to the Conference of Parties of the UNFCCC (1999) prioritized and identified as areas of action the encouragement of NTFPs and the encouragement of sustainable agriculture, to both of which the project will contribute. Vanuatu's National Adaptation Programme of Action (NAPA) prioritised improvements in agriculture and food security; water management policies; sustainable tourism; community-based marine resource management; and sustainable forest management. Throughout the document, integrated, local and community-based approaches are proposed to address the potential problems in the future from climate change in the country. The approaches proposed here are consistent with the NAPA and will cover a number of activities specifically proposed in it, including integrated coastal management, local income generating activities to increase resilience, and management of water resources at the watershed scale.

c) Alignment with GEF focal area Strategies

314. **Biodiversity:** in the biodiversity Focal Area, the project will focus on Objective 1: to improve the sustainability of protected area systems by increasing the area of protected areas to fill ecosystem gaps (particularly montane forests and reef ecosystems) and increase the effectiveness of management of these areas through the strengthening of community-based institutions and governance, within the overall framework of a ridge-to-reef approach. It will also contribute to the financial sustainability of protected area management by supporting the development of mechanisms for channelling income from the tourism sector and carbon payments.

315. **Land degradation:** the project will attempt to reduce pressures on natural resources from competing land uses in the wider landscape (Objective 3), by supporting evidence-based processes that will enable multiple stakeholders to engage in negotiated planning, decision-making and governance, taking into account the nature, magnitude and implications of land use alternatives and their interactions at a landscape level in such a way as to optimise the balance of social and environmental outcomes.

316. **International waters:** the project will contribute to IW-3 Outcome 1 through its mainstreaming of ICZM principles into policy frameworks under project Output 1.1.3; IW-3 Outcome 2 through its support to the establishment and management of MPAs under project Outcome 2.5, and management of fisheries resources under project Outcome 2.2; and to IW-3 Outcome 3 through the mechanisms for knowledge management and information sharing proposed under project Outcome 3.1.

317. **Climate change:** The project will promote the conservation and enhancement of carbon stocks through the sustainable management of land use, land-use change, and forestry (Objective 5), specifically by developing and implementing agricultural practices that reduce forest degradation and encourage forest restoration (e.g. agroforestry and silvo-pastoral production systems) and reduce demands for fuel wood.

318. **SFM/REDD:** the project will contribute to Objectives 1 (Reduced pressures on forest resources and generate sustainable flows of forest ecosystem services) and 2 (Strengthen the enabling environment to reduce GHG emissions from deforestation and forest degradation and enhance carbon sinks from LULUCF activities), through supporting improved landscape-wide planning and governance of resource use in order to address unsustainable land use change dynamics that threaten forest areas, as well as by supporting financial mechanisms (including carbon markets) to support and motivate forest conservation.

319. **Aichi Targets:** The project will contribute to achievement of a number of Aichi Targets:

- Strategic Goal B: *Reduce the direct pressures on biodiversity and promote sustainable use* (7). By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity. The project will result in:
 - A 6,625ha increase in the area over which sustainable hillside farming practices are applied
 - A 600ha increase in the area over which sustainable hillside ranching practices are applied.
- Strategic Goal D: *Enhance the benefits to all from biodiversity and ecosystem services, target 15:* By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification. The project will result in:
 - Restoration of 800ha (in addition to the sustainable hillside farming and ranching practices mentioned above)
 - Total carbon benefit from restoration, sustainable farming and ranching and avoided deforestation of 2,271,231tCO_{2eq}

d) Alignment with FAO Strategic Framework and Objectives

320. The project is aligned with the FAO's Strategic Framework and Objectives as described in the new Medium Term Plan for 2014 – 2017. The project specifically aligns with the Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. The project is also aligned with Regional Priority Area 4: Environmental Management and Resilience.

321. The project is also aligned with priority areas of the FAO's Vanuatu Country Programming Framework (CPF) 2013 – 2017. Priority Area B: Environmental management and resilience (including disaster preparedness, emergency response and climate change), Priority Area B Outcome 1: Enhanced biodiversity conservation and climate change, and Priority Area B Outcome 3: Integrated sustainable land and coastal management. The project is also aligned with FAO's regional priorities on: Enhancing equitable, productive and sustainable natural resource management and utilization; Coping with the impact of climate change on food and agriculture. The relevant UNDAF priority is UNDAF Outcome 1.1: By 2017 the most vulnerable communities across the PICTs are more resilient and select government agencies, civil society organizations and communities have enhanced capacity to apply integrated approaches to environmental management, climate change adaptation/mitigation and disaster risk management. This includes the MDG 7 and regional framework on Pacific Plan Goal Sustainable Development and global initiatives on Convention on Biological Diversity and Hyogo Framework for Action 2005 -2017.

SECTION 2: INNOVATIVENESS, POTENTIAL FOR SCALING UP AND SUSTAINABILITY

2.1 INNOVATIVENESS

322. The key aspect of the project's innovativeness at national and regional levels will be its use of a genuinely integrated and multi-faceted approach, that directly addresses the challenges presented in reconciling two very different sets of frameworks and paradigms: on the one hand, the traditional "kastom"-centred sphere featuring customary land ownership, complex sociocultural interactions and obligations and livelihood support systems strongly based on natural resource management and subsistence agriculture; and on the other, the development-focused sphere that features more "western" concepts regarding the governance and ownership of natural resources, with more of a focus on productivity, profitability and market insertion. Through its emphasis on evidence-based multi-stakeholder planning and decision-making, the project aims to enable stakeholders in these two spheres to communicate and negotiate effectively, resulting in natural resources being managed in a way that optimises the balance between their respective interests, while allowing the country's rapidly growing population to satisfy its very real and increasing needs in terms of human development and living conditions.

323. This approach will build on Vanuatu's regionally innovative approach to PA management, focused on small PAs owned and managed by local community members in accordance with customary rules; it will add to this by integrating these PAs as elements of overall landscapes whose management is negotiated between diverse local and national stakeholders in recognition of the spatial flows of ecosystem goods and services between different landscape units.

2.2. POTENTIAL FOR SCALING UP

324. The 80+ islands that constitute the archipelago of Vanuatu are highly diverse in terms of topography, vegetation cover and demography, but virtually all of their native population are of the same broad ethnic group (Melanesian Ni-Vanuatu). One of the criteria for the selection of the project's target locations was that they would between them cover a range of socioeconomic and biophysical conditions, in order to maximize the potential for scaling up the experiences generated there to national level. It is as a consequence to expect that the lessons generated will be relevant for scaling up throughout the country, in islands located along the entire range of conditions of population density, geographical isolation, market connectedness, ecosystem intactness and threat levels.

2.3 SUSTAINABILITY

325. **Social sustainability** of the project activities and outcomes will be achieved through participatory approaches including strategies and planning aimed at complete participation of local communities, organizations and other stakeholders in biodiversity and ecosystems conservation, addressing issues related to land degradation and climate change mitigation

through sustainable land, forest and marine management including sustainable mechanisms for PA management, capacity building and monitoring and evaluation.

326. Social sustainability requires the involvement of institutions in the decision making processes from the beginning of the project so that the efforts continue even after external interventions cease. Ownership of the project in terms of strategies and approaches will ensure that local and state level institutions will be extending the needed institutional support for up-scaling the successful project experiences all over Vanuatu. Hence, the project will ensure institutional and stakeholder involvement in project design and in implementation of project activities. Additionally, the project will support and ensure gender equality in all decision making process in project activities and gender based use of local resources and microenterprises that will be developed in the project under the activities for supporting local livelihoods.

327. Social sustainability is ensured from the project designing stages as the field visits to the selected sites during the project preparation were conducted under the leadership of local people and through the concerned departments who will be the partners in project implementation indicating ownership of project by local communities and other stakeholders. Due consultations were held with community and other stakeholders while designing the project during the project preparation phase.

328. **Environmental sustainability** is at the core of the project's approach, and will be achieved through the promotion of forms and levels of natural resource management that correspond to the ecological characteristics and carrying capacities of the land units where they are applied, and the prioritisation of land uses across the landscape in accordance with spatial variations in environmental conditions. In addition, environmental sustainability will be promoted by addressing environmental interactions at landscape scale, such as upstream-downstream flows of environmental impacts with the potential to affect the status of aquatic or coastal/marine ecosystems.

329. **Financial and economic sustainability** will be ensured through the promotion of financing mechanisms under Outcome 2.6, which will be fed by a combination of income from the country's growing and lucrative cruise-ship tourism industry, contributions from small-scale tourism businesses and PES schemes.

330. The **sustainability of the capacities** developed through the project will be ensured by selecting trainees from the target communities, ensuring that they are qualified and can retain and provide the skills to the project and beyond. Also the trainees will be selected on a consensus basis and with the consent of the community groups. Trainees with long service ahead in the government will be selected so that their skills will be available in the long run to the respective departments. An assurance will also be sought from the respective government department for retaining the trained staff members within the department for at least 10 years before they are transferred.

331. The cornerstone for long term sustainability of the project activities is that all participants and stakeholders are fully engaged in the project and that inter-sectoral and inter-ministerial linkages are strongly established. In order to accomplish this, the project will seek appointment of focal persons representing MLNR and MAQFF and other concerned ministries and departments to have institutional and project memory. The project staff and the experts for the project will be selected based on their past experience and exposure to issues and mechanisms related to community mobilization, SFM and SLM

practices, PA management, coastal area management and development and its legal aspects.

2.4 GENDER EQUALITY

332. There are particular opportunities for “conservation-friendly” forms of livelihood support activities to generate benefits for women, especially in the case of ecotourism, where they can earn income directly from the management of visitor accommodation and catering facilities, and NTFPs, given that existing value chains for NTFPs are largely controlled by women. These options compare favourably with the alternative scenario featuring land conversion for agriculture and ranching, the economic and power benefits from which typically accrue mostly to men.

2.5 INDIGENOUS PEOPLES

333. There are no separate indigenous groups in the country whose needs require to be given special consideration. On the other hand, almost 100 percent of the population are Melanesian ni-Vanuatu, and can be considered indigenous. For this reason, the FAO’s Environmental and Social Management Guideline classifies the project to be of medium risk, and requires Free, Prior and Informed Consent (FPIC) to be incorporated in the project. The project is designed to accommodate workshops on multi-stakeholder mechanisms for landscape planning, decision-making and conflict management, for which FPIC will be incorporated.

2.6 CAPACITY DEVELOPMENT

334. The project will focus on developing capacities at all levels, including policy makers and planners in central Government, technical staff operating at central and field levels, and community members (including traditionally marginalised sectors). Capacity development activities will be defined and planned on the basis of initial needs analyses of each target group, which will in addition consider educational and sociocultural factors, leading to the formulation of differentiated capacity development strategies and plans for each group. Capacity development will, as appropriate, combine conceptual and theoretical as well as hands-on training, with a particular focus on developing capacities for situation analysis, innovation and adaptation. Capacity development activities will be followed up by on-the-job support, involving review of how the stakeholders are applying their capacities in practice and the provision of additional, complementary support as required in order to fill in any gaps.

335.

2.7 HUMAN RIGHTS BASED APPROACHES (HRBA). INCLUDING RIGHT TO FOOD, DECENT WORK, ACCOUNTABILITY TO AFFECTED POPULATIONS

336. The project’s approach strongly emphasises the respect of cultural traditions and of the need for the populations of the target localities to continue making use of their natural resources in support of their needs for food security and livelihood sustainability, while recognising their valid aspirations for the improvement of their economic and living conditions. This is evident for example in the project’s support to the national approach to protected areas, based on small community-driven initiatives; the proposal to work wherever possible through existing social structures, respecting the roles of traditional chiefs while providing complementary and culturally-sensitive opportunities for the representation of diverse other stakeholders, including women; and the importance given to identifying and

promoting economic and livelihood alternatives to avoid the risk of unsustainable opportunity costs being generated by conservation initiatives.

SECTION 3 – INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

3.1 ROLES, RESPONSIBILITIES AND COORDINATION

3.1.1 Roles and responsibilities of main institutions

337. The project will be executed by FAO with technical and logistical and human resources support from National and Provincial Governments and local bodies and community based organizations. The project will be implemented by FAO through the Ministry of Climate Change in association with three main line Ministries, namely Ministry of Lands and Natural Resources (MLNR), Ministry of Agriculture, Quarantine, Forestry and Fisheries (MAQFF) and Ministry of Trade, Tourism, Commerce and Industry (MTTCI).

338. The Ministry of Climate Change together with FAO will be responsible for overall coordination and implementation of the project and for supporting technical outputs of Components 1, 2 and 3. The MLNR together with MAQFF will play a major role in supporting the project in establishing and legislation of terrestrial and marine PAs and in coordinating the activities related to the establishment and management of PA financing mechanisms along with the Finance Ministry.

339. The project will work in collaboration and coordination with all the key nodal ministries namely the Ministry of Climate Change, MLNR, MAQFF and MTTCI along with Finance Ministry and its extension facilities at project sites and the resident national and international NGOs for cost effective implementation of project activities.

3.1.2 Coordination with other institutions and initiatives

340. The project will work in close collaboration and coordination with a number of national, regional and international initiatives, in order to realize opportunities for synergies, sustainability and scaling up. A number of partnerships have been discussed during the project formulation phase: given that some of these partner initiatives are still under development and may evolve further between the time of CEO Endorsement and project start-up, the precise nature of the partnerships will be confirmed at project inception.

341. Partnership opportunities identified during the PPG phase include the following:

- The Australian Centre for International Agricultural Research (ACIAR) project **“Enhancing value added products and environmental benefits from agroforestry systems in the Pacific”**. This four-year project, covering Papua New Guinea, Solomon Islands, Vanuatu, Fiji, will be coordinated in Vanuatu by the Department of Industry of the Ministry of Trade Tourism Industry & Commerce, and has an estimated budget for Vanuatu of USD 571,516. Its inception workshop, in which details of project implementation by its in-country partners will be confirmed, is programmed for June 2016.

The project will explore opportunities for new value-added agroforestry products to improve livelihoods. This research will identify the best opportunities for value-adding, and research value-adding techniques for these products. It will also investigate integrated agroforestry systems that are likely to have environmental benefits such as catchment revegetation along with economic returns to

smallholders. These agroforestry systems will generate income and give smallholders greater access to remote markets, thus enhancing self-reliance, increasing environmental benefits and reducing poverty. A multidisciplinary team with collaborators from the University of the Sunshine Coast, University of Adelaide and Southern Cross University will work with government departments, NGOs (including Live and Learn in Vanuatu) and private sector processors in all countries.

Initial discussions indicate that there is likely to be significant geographical overlap with the target localities of this project, which will allow the ACIAR initiative to contribute directly to the project's aims under Outcome 2.4; this will however be confirmed at project inception. In those project localities where the ACIAR project does not work directly, there will be significant scope for exchange of information on experiences and lessons learned.

- The **Pacific Ecosystems-Based Adaptation to Climate Change (PEBACC)** project of the South Pacific Regional Environment Programme (SPREP)⁶⁵: this is a multi-country programme funded by German Government, which in Vanuatu will focus on Port Vila, Efate (including catchment areas) and Tanna (the whole island). Opportunities for collaboration in these two shared target localities will include support by PEBACC to the protection of terrestrial and marine ecosystems of importance for climate change adaptation, and the establishment or strengthening of PAs due to their EBA value; these will constitute important elements of the integrated R2R landscape approach which the GEF project will be promoting. The landscape-wide planning proposed under Outcome 2.1 and the PA prioritisation proposed under Outcome 2.5 will be closely coordinated with PEBACC in order to ensure harmonization of approaches and criteria.
- The Regional cooperation project to **Restore Ecosystem Services and Adapt to Climate Change (RESCCUE)** is funded by the French Government and will be working on North West, North and East Efate (from Mangaliliu to Pang Pang), aiming to increase resilience to climate change impacts, with an estimated budget of Euro 709,500 for Vanuatu. Discussions were held with representatives of RESCCUE during the PPG phase regarding the potential for collaboration on Efate. At that time, the activities of RESCCUE in Vanuatu were also under preparation: initial consultations had occurred, and a communications plan and capacity building framework have been prepared. The project will focus on issues including marine management; supporting capacity to create community management plans for terrestrial conservation; waste management; alternative sources of income generation, e.g. eco-tourism; and better knowledge at local level and in government sectors regarding current legislation. The project will be working through the NGO Live and Learn. It was agreed that there appeared to be significant scope for collaboration between the GEF project and RECCUE, for example in the form of the exchange of information generated by the technical studies to be supported by the two projects, and through the pooling of resources and sharing of responsibilities for livelihood support activities.
- On Aneityum and Efate, it is proposed that the project will partner with the NGO **Live and Learn** in developing socially appropriate and sustainable schemes for generating

⁶⁵ <https://www.sprep.org/pebacc>

financial resources, and channelling them in support of resource management initiatives, managed by local people, which promote positive flows of ecosystem goods and services in accordance with R2R principles, within the framework of the Nakau Programme (see Box 5 and description of Output 2.6.2).

342. The project will also be closely coordinated with the following other initiatives:

- The SPC/GIZ **Regional Programme on Adaptation to Climate Change in the Pacific Island Region (ACCPIR)**, which will work in pilot sites on Pele Island within the North Efate target locality as well as the communities of Teouma in South Efate and Hasevaia community in South Santo. The activities to be piloted include introducing climate-resistant crops, breeding extreme weather-adapted livestock, developing community land-use plans, trialling new agroforestry and soil stabilisation methods, and undertaking innovative climate adaptation education programmes. These activities will be directly implemented by Vanuatu's project partners the Department of Agriculture, Department of Forests, Department of Quarantine and Livestock, Department of Environment and Conservation, Wan Smolbag Theatre, Live and Learn Vanuatu, the Vanuatu Farm Support Association, and the Vanuatu Agricultural Research and Technical Centre.
- The **Pacific Mangroves Initiative (PMI)** through its two projects i.e. Mangrove Ecosystems for Sustainable Climate Change Adaptation and Livelihoods (MESCAL) and Mangrove Rehabilitation for Sustainably Managed Healthy Forests (MARSH).
- The regional **Marine and Coastal Biodiversity Management in Pacific Island Countries (MACBIO)** project, funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) under its International Climate Initiative. The objectives of MACBIO are that 1) The economic value of marine and coastal ecosystem services is considered in national development planning; 2) Exclusive economic zone-wide spatial planning frameworks are used to align national marine and coastal protected area systems with the requirements of ecosystem conservation; 3) Best practices for the management of marine protected areas, including payments for environmental services, are demonstrated at selected sites; and 4) Concepts and instruments that have proven successful for the sustainable management of marine and coastal biodiversity are disseminated regionally and internationally.

343. As proposed under Output 3.1.1 above, the project will invest in systematization and exchange of experiences with the regional R2R programme to which it belongs (GEF ID 5395 **"R2R: Pacific Islands Ridge-to-Reef National Priorities - Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods"**), and its constituent national and regional projects. At the same time, the project team will establish mechanisms and protocols for receiving inputs from the R2R programme in terms of lessons learnt through others of its constituent projects, for communicating these inputs to national partners and for incorporating them into project management decisions and strategies.

344. The project will in particular coordinate closely with the R2R programme constituent project, GEF ID 5404 **"Ridge to Reef - Testing the Integration of Water, Land, Forest & Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries"**, implemented by UNDP

through the Department of Environment, which will focus on strengthening national and local coordination in support of the development and implementation of the Tagabe Catchment R2R Management Plan, strengthening capacity for participatory monitoring and evaluation of the Tagabe Catchment R2R Management Plan, and establishing partnerships for sustainable coastal area development via the application of Integrated Coastal Management and Marine Spatial Planning approaches (Tagabe catchment is located in South Efate, on the same island as the project's North Efate target locality). The fact that project 5404 is also led by the DEPC will facilitate coordination and exchange of experiences.

345. Information and experiences will also be exchanged, through the mechanisms proposed under component 3, with UNDP LDCF project **Adaptation to Climate Change in the Coastal Zone in Vanuatu** (GEF ID 5049), which is working in pilot localities on Epi, south Santo, central Pentecost, Tafea outer islands, Malekula and the Torres islands.

346. Two projects are being initiated in support of MRV and will come into full operation soon. One is the World Bank funded climate change project housed at the Ministry of Climate Change which has a component on REDD+ related activities and is being implemented by Department of Forests. A GIZ Forest Land Restoration addressing REDD+ related issues is also being implemented in collaboration with Vanuatu DEC, DoF and SPC. Initial discussions have been held with DEC and DoF regarding collaboration modalities with these projects, and these will be confirmed at project inception.

3.2 IMPLEMENTATION ARRANGEMENTS

3.2.1 Roles and responsibilities of the executing partners

347. The FAO will be the GEF Agency responsible for ensuring project implementation as in accordance with GEF requirements and as requested by the government of Vanuatu, in close cooperation with the Ministry of Climate Change, MLNR, MAQFF and the other project partners. In addition, as executing agency FAO will deliver procurement and contracting services to the project in accordance with FAO rules and procedures, as well as financial services to manage GEFTF resources (please see Section 3.2.2 below for detail of the roles and responsibilities of FAO in this regard).

348. The Ministry of Climate Change will be the lead government counterpart and the main project executing partner: the Director of Environment and Conservation of the Ministry of Climate Change will act as National Project Director (NPD). In particular, the Ministry of Climate Change will support the project execution team by providing guidance on effective management of existing PAs and extension of PA network and sustainable financing mechanism including sustainable livelihoods for participating communities and land owners. It will lead the project in policy formulation and provide a platform for the cross-sectoral coordination thereof. The Ministry of Climate Change will also play a vital role in facilitating and guiding the establishment of potential funding mechanisms in support of environmental management and restoration, and further support the establishment of a cross-sectoral forum to coordinate SLM activities.

349. Other key Government partners will include the Ministry of Agriculture, Quarantine, Forestry and Fisheries (MAQFF) and the Ministry of Trade, Tourism, Commerce and Industry (MTTCI), which will be represented on the Project Steering Committee (see below).

350. The project will work with other on-going programmes in the project implementation

areas in a complementary manner. The project will work in partnership with various national and international NGOs and the extension centres of University of South Pacific (USP). Bilateral and multilateral agencies including AusAID and SPC will provide support in the form of technical services and cofinancing.

351. **Other key partners** supporting project execution will include the provincial governments, councils of chiefs and community organizations. The provinces will incorporate lessons learned from local planning exercises of the project, in provincial planning activities. The local NGOs represented through VANGO and UNDP GEF SGP projects and provincial administration will support the project by allowing its facilities and extension centres for conducting capacity building trainings and workshops.

352. There will be national and local level technical steering committees that harmonize approaches and cross pollinate experiences drawn from other projects to ensure maximum synergy.

353. The project will achieve a number of key outputs through letters of agreements (LoAs) that will be elaborated and signed between the FAO and collaborating partners. Funds received under a LoA will be used to execute the project activities in conformity with FAO's rules and procedures. The respective LoAs are listed under the "Contracts" budget line of the project budget.

3.2.2 FAO's role and responsibilities, as the GEF Agency, including delineation of responsibilities internally within FAO

354. FAO will be the GEF Implementing Agency (IA) for the Project, as well as the financial and operational executing agency. As the GEF IA, FAO will be responsible for project oversight to ensure that GEF policies and criteria are adhered to, and that the project meets its objectives and achieves expected outcomes and outputs, as established in this Project Document, in an efficient and effective manner. FAO will supervise and provide technical guidance for the overall implementation process. Administration of the GEFTF grant will be in compliance with the rules and procedures of FAO, and in accordance with the agreement between FAO and the GEF Trustee.

355. The specific responsibilities for FAO will include:

- Administer funds from GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
- Carry out at least one supervision mission per year;
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

356. FAO will also be the financial and operational executor of the GEF resources including financial management, procurement of goods and contracting of services following FAO rules and procedures. As the financial executor, FAO will provide six-monthly financial reports including a statement of project expenditures to the MLNR and the Project Steering Committee (PSC) (see below). Based on the provisions of the present Project Document, and taking into account progress with the financial execution of the project and the provisions of

the Annual Work Plans and Budgets approved by the PSC, FAO will prepare budget revisions to maintain the budget in accordance with the financial management system of FAO. These budget revisions will be provided to the PMU and the PSC to facilitate project planning and execution. FAO will support the PMU in the planning and execution of contracting and procurement processes.

357. Budget Holder (BH): The FAO Sub-Regional Representative for the Pacific Islands based in Samoa will be the Budget Holder (BH) of this project's GEF resources. The BH, working in close consultation with the Lead Technical Officer (LTO), will be responsible for the operational as well as administrative and financial management of the project. In this capacity, the BH will authorize the disbursement of GEF project funds. The BH specific tasks will include: (1) contracting and procurement processes based on the requests from PMU and in accordance with the approved Annual Work Plan and Budget; (2) process the payments corresponding to delivery of goods, services and technical products based on the prior clearance of the same by the PMU; (3) provide six-monthly financial reports including a statement of project expenditures to the PMU and the PSC; (4) at least one time per year or more frequent if required, prepare Budget Revisions for submission to TCI/GEF Coordination Unit for approval and (5) authorization for approval of procurement and letters of agreement in excess of the delegated authority will be requested as provided for by the Organization's relevant rules and procedures.

358. The FAO Lead Technical Officer (LTO): The SAP Forestry Officer will be the LTO for the project and will be responsible for to provide technical guidance to the project team to ensure delivery of quality technical outputs in close consultation with the FAO Project Task Force (PTF) members. The LTO will coordinate the provision of appropriate technical backstopping from all the concerned FAO units represented in the Project Task Force responding to requests from the MLNR and the Project Management Committee. The primary areas of LTO support to the project include;

- review and ensure clearance by the relevant FAO technical officers of all technical Terms of Reference (TOR) for consultants and the Letter of Agreement (LoA) for contracts to be performed under the project.
- review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
- in close collaboration with MLNR and NPD, lead the selection of project staff, consultants, and other institutions to be contracted or whom an LoA will be signed;
- assist with review and provision of technical comments to draft technical products/reports on request from the Project Steering Committee during project execution;
- review and approve project progress reports submitted by the PM, in coordination with the BH;
- provide technical support to the National Project Director and PM and provide technical inputs to procurement and contract documentation;
- review the Project Progress Reports (PPRs) and prepare the annual Project Implementation Review (PIR);
- undertake field annual (or as needed) supervision missions and monitor technical implementation as established in the project results framework;
- review and clear final technical products delivered by consultants and contract holders finance by GEF resources before final payment can be processed.

- review the TORs for the final evaluation; participate in the mission including the final workshop with all key project stakeholders, development and follow-up to recommendations on how to insure sustainability of project outputs and results after the end of the project.

359. **FAO Project Task Force (FAO-PTF):** A multi-disciplinary Project Task Force (PTF) will be established within FAO will be led by the Budget Holder and include the LTO, GEF Coordination Unit, and other technical units supporting the implementation of this project. The main responsibility of the PTF is to provide the technical guidance to the LTO and the PMU for successful project implementation and advice on key implementation issues arise.

360. **Participating Units:** The relevant participating units from across FAO will be involved to support project implementation to ensure that the project is successful in achieving intended outputs and objectives. When appropriate, these units within HQ and RAP and SAP MDT will provide technical support in areas such as integrated agro ecosystem management and sustainable agriculture, climate smart agriculture and adaptation, livestock waste management, livestock production and animal husbandry, biodiversity conservation, forestry and watershed management, and sustainable land management. When necessary and requested, the FAO Investment Centre Division (TCI) will provide adaptive management support and results-based management oversight and guidance to the LTO and the participating units.

361. **The FAO-GEF Coordination Unit in TCI** will review and approve project progress reports (PPRs), annual project implementation reviews (PIRs), financial reports, and budget revisions based on the AWP/B. This FAO GEF Coordination Unit specific task will;

- Review and clear the annual PIR and undertake supervision missions if considered necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF.
- Participate in the mid-term and final evaluations and the development of corrective actions in the project implementation strategy in the case needed to mitigate eventual risks affecting the timely and effective implementation of the project.
- In collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

362. The **FAO Finance Division** will provide final clearance of any budget revisions. It will also provide the annual Financial Reports to the GEF Trustee and, in collaboration with the FAO-GEF Coordination Unit, request project funds on a six-monthly basis to the GEF Trustee.

3.2.3: Project Management Unit

363. The project will be implemented in practice and managed on a day-to-day basis through a **Project Management Unit (PMU)** based in Port Vila, and hosted by MLNR (ideally located in the offices of the Department of Environment and Conservation of MLNR in order to maximize national ownership of the project). The PMU will be led by a **National Project Coordinator (NPC)**, reporting to a **National Project Director** (a member of MLNR, probably the Director of Environment and Conservation) under the overall oversight of a national **Project Steering Committee** (Project Board).

364. The NPC will meet with the NPD on a regular basis to ensure that the project continues to be consistent with national priorities and context, its activities are harmonized and

complementary with those of national institutions, and that it contributes to the institutional strengthening of the DEC and other key national institutions.

365. The NPC would be advised by a Chief Technical Adviser (CTA), whose role will be progressively phased out during the course of the project in order to maximize national ownership. The office will report directly to the BH and work in close collaboration with LTO. The PMO will report on annual basis to the LPSC and the Project Steering committee (PSC).

366. The NPC and CTA will be supported by a technical specialists covering the issues of i) natural resource governance, participation and livelihood alternatives; ii) biodiversity/natural resource management; and iii) monitoring, evaluation, knowledge management and communication.

367. At local level, there will be one **Local Conservation Officer** based in each of the target localities. In order to promote local ownership and institutional development, it is suggested that on Efate and Tanna the LCOs should be based in the offices of the SHEFA and TAFEA provincial governments, respectively.

3.2.4: Project technical, coordination and steering committees

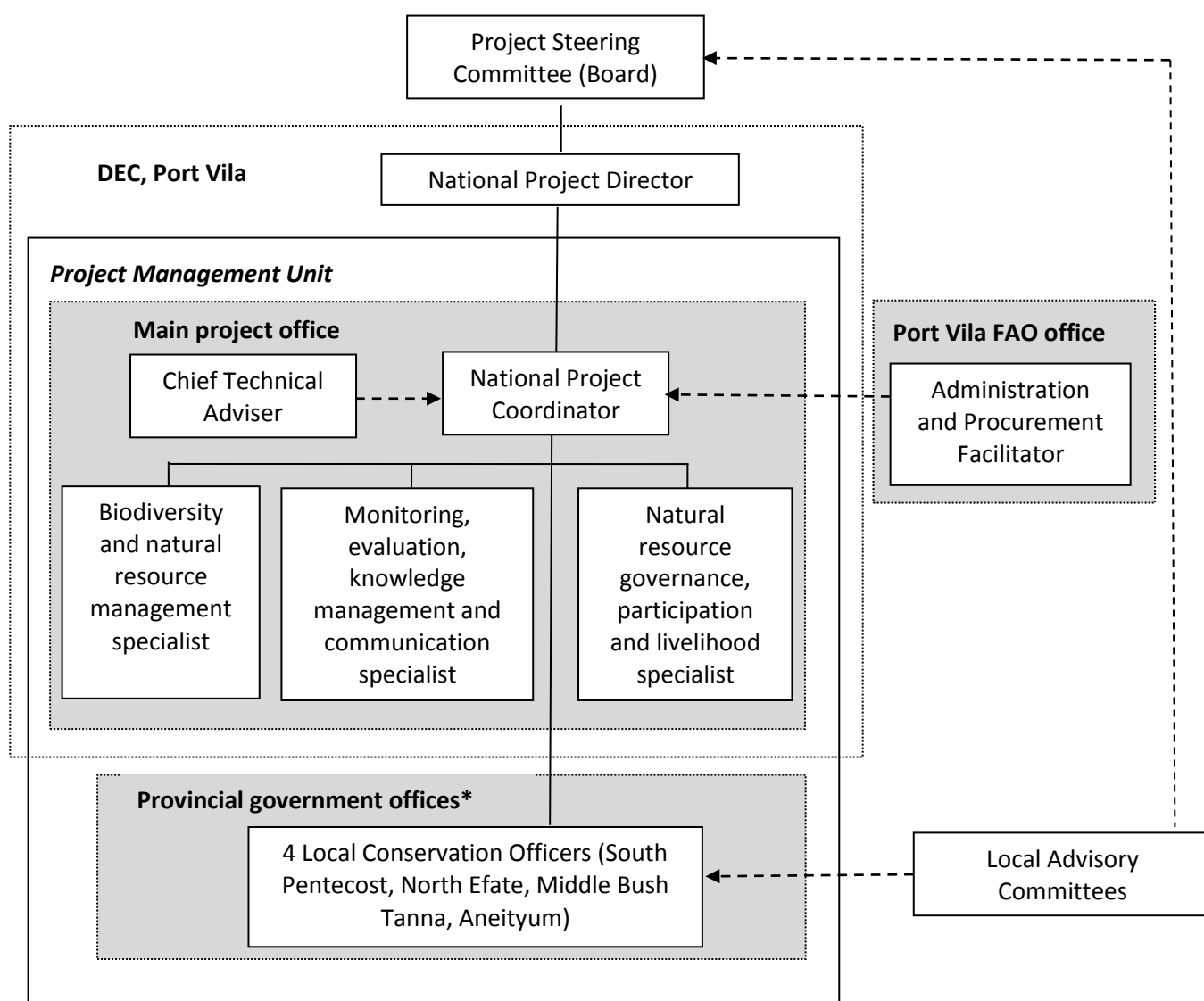
368. A **Project Steering Committee (PSC)** will be established for the oversight of the project activities at national level. The PSC will be Chaired by the Minister of Lands and Natural Resources (or his/her nominee), with the participation of representatives from MAQFF MTTCI, the Provincial Governments of Penama, Shefa and Tafea, and the National Council of Chiefs (Vaturisu), as well as FAO as GEF Implementing Agency. The NPC will be the secretary of the PSC. Others may be invited to attend as observers, for example from civil society organizations and external cooperation agencies. The PSC will meet at least twice in a year and will carry out the following responsibilities:

- ensure overall oversight of project progress and achievement of planned results as presently in the six monthly Project Progress Reports (PPRs);
- take decisions in the course of the practical organization, coordination and implementation of the project;
- facilitate cooperation among focal Ministries and project participating partners and project support at the local level;
- provide information and overall guidance and coordination to the Local Programme Steering Committees (LPSC);
- facilitate the provision of co-financing support in a timely and effective manner; and
- review six monthly Project Progress and Financial Reports and approve Annual Work Plans and Budget.
- Additionally, the committee will ensure the project's sustainability (in view of up-scaling, replication and mainstreaming).

369. **Local Advisory Committees (LACs)**: will be hosted by each province of the project area and will allow key local representatives to advise the the Local Conservation Officers on project activities at local level. It is foreseen that they will be chaired and convened by the Provincial Government and will also include representatives from the local Council of Chiefs, women's groups, sector-specific community-based organizations (such as fishers), local NGOs and local level representatives from key institutions such as MLNR, MAQFF and MTTCI. Their composition and functioning will be determined by local stakeholders, under the oversight of the Provincial Government and local Council of Chiefs, with advice from the

Local Conservation Officer, in order to ensure that the interests of different stakeholder groups are represented in a balanced manner. In addition to providing a forum for discussion and advice on project activities, and for coordination between the different institutions and organizations participating in the project at local level, the LACs will be responsible for approving the island-specific annual work plans of the project. The Provincial Government representative participating in the meetings of each LAC will be responsible for communicating the results to the meetings of the national level PSC.

3.2.4: Organizational chart



*Except on Aneityum, which is also covered by the TAFEA office in Tanna

3.3 RISK MANAGEMENT

3.3.1 Significant risks facing the project

370. Please see the risks and mitigation measures detailed by the risk table in Appendix 4.

Table 8. Risks and mitigation measures

Risk	Rating	Mitigation Measures
Environmental risks (mostly due to climate change)		
Climate change is likely to increase the occurrence of severe weather events, raise sea levels, and move the natural range of some species “up the hill” assuming that the temperatures will increase. It may also have an impact on agriculture and livelihoods as a result of damage to crops from storms, drought, etc. Productivity changes in forestry and agriculture.	High	Project activities on Monitoring and evaluation under Component 4 will be designed to identify changes in ecosystems due to climate change to undertake appropriate remedial actions. Plants and multiple value tree species for restoration and improvements to agriculture for SLM and income generation will be selected so that they are resilient to the most likely impacts of climate change for e.g. drought, outbreaks of pests and diseases, etc. Climate resilient forest and land management techniques will also be promoted in local communities e.g. soil and water conservation and sustainable management of watersheds.
Leakage in CC activities: Shifting of unsustainable agricultural practices and increase in wood harvesting in non-project areas	Low	<p>Leakage in the context of this project is unlikely. Forest degradation from wood harvesting in Vanuatu is not driven by demand for industrial wood, but by fuelwood collection. However, fuelwood collection is very localized (on the many small islands with no inter-island trade in fuel wood). Hence, reducing production in one place is unlikely to lead to increased production elsewhere to replace this. Furthermore, the project will seek to reduce fuelwood consumption in some locations through the promotion of solar driers as an alternative drying technology.</p> <p>With respect to cattle raising, replacing widespread forest conversion with sylvo-pastoral production should not increase areas used for cattle raising (above the baseline) because these systems - if implemented well - have been shown to have higher beef production per ha than production from unmanaged pasture land.</p>
Social and institutional risks		
Local communities: Collaboration and involvement of	High	Communities were consulted during the project document preparation during the PPG and it has been ensured that community will be active

landowning communities will be crucial for the long-term success of this project, but communities must meet their needs before they can set-aside areas for conservation. It may also still be difficult to reach an agreement within communities on courses of action that will be enforceable and respected by all.		participants from the very beginning in the design, implementation and management of project activities. The project design is guided by and learned from the ongoing work on customary land reforms and from the stakeholders involved in that process. There are already over 100 unofficial conservation areas in Vanuatu, so the project will stress the benefits of formalising conservation agreements where landowners wish to do this. A second strategy to overcome reluctance is provision of incentives i.e. development benefits for communities through participatory methods to engage in conservation, in addition to building upon the existing interest in conservation and explaining how conservation and improved marine, forest and land management techniques can benefit local people in other ways.
Government capacity (human and financial resources): As already noted, the number of people involved in forestry, land management and the environment within government are very small. Furthermore, national government budgets for these activities are inadequate. Limited support and implementation capacity in government. This may have a negative impact on project delivery and will certainly put at risk some aspects of project sustainability.	Medium	The capacity of government agencies in Vanuatu is weak. The project recognises these weaknesses and shortcomings and has set-out to address them with a specific capacity building component that will target the key weaknesses; most important areas and relevant stakeholders and develop strategies to overcome weaknesses in these for the long-term sustainability of project outcomes. Additionally, the project will emphasise working in collaboration across agencies and with local communities to reduce the demands placed on government staff. Broader support for the project will be generated by awareness raising targeted at influential decision makers at local, provincial and national levels. These mitigation measures will also be supported by regular monitoring of project progress, so that corrective actions will be taken appropriately and at the right time if necessary.
Economic risks		
Funding for PA management: Inadequate funding for protected area management.	Medium to high	The financing strategy will assess all possible sources of funding and focus on those most easily secured. Funds for sustainable PA management will be established with community involvement. Protected area management activities will also be prioritised in case funding is limited.
Incentives for community involved sustainable land	Medium to high	The project will focus on PA management, CC, SLM and SFM activities that are both good for the

and coastal management Incentives are too low to persuade landowners to change their behaviour.		environment and are economically viable. The project will also devote time and resources to explain why and how improved forest and land management techniques can benefit the land owners economically. The project will minimise and try to avoid monetary incentives wherever possible, unless these can be sustained. Instead it will focus more on income generating activities. When these are proposed, they will be based on a detailed and realistic analysis of costs and benefits. The project will also ensure that the benefits are distributed in a way that is reasonable, fair and equitable.
Lack of experience in fund management	Medium	The project will train the stakeholders particularly the key stakeholders in establishment of PA financing mechanisms, their management and their operation for the sustainable management of PAs.

3.3.2 Environmental and social risks

371. Following FAO's Environmental and Social Management Guidelines, the proposed project's risk is classified as Low. Based on the project objective, outcomes and outputs, no adverse environmental or social impacts are likely and it conforms to FAO's pre-approved list of projects excluded from a detailed environmental assessment. On the contrary, the project and the GEF resources invested are expected to have positive impacts on agriculture and forestry resources, creating global environmental benefits.

3.3.3 Risk management strategy

372. Project risks have been identified and analyzed during the full project preparation and mitigation measures have been incorporated into the project design (see Risk Matrix in Appendix 4). With the support from and under the supervision of FAO, the Project Management Committee (PMC) will be responsible for the day-to-day management of these risks and the effective implementation of mitigation measures. The project's M&E system will serve to monitor project outcomes and outputs indicators, project risks and mitigation measures. The PMC will also be responsible for monitoring the effectiveness of mitigation measures and adjusting mitigation strategies as needed, and identify and manage any eventual new risks not foreseen during project development, in dialogue with other project partners.

373. The six-monthly Project Progress Report (see section 4.5.3) is the main tool for project risk monitoring and management. The reports include a section on systematic follow-up of risks and mitigation actions identified in previous reporting periods. The PPRs also include a section for identification of eventual new risks or risks that still need attention, their rating and mitigation actions, as well as the responsible for monitoring those actions and the expected timeline. FAO will monitor the project risk management closely and follow up if needed by providing support for the adjustment and implementation of risk mitigation strategies. Reporting on risk monitoring and rating will also be part of the annual Project Implementation Review (PIR) prepared by FAO and submitted to the GEF Secretariat.

3.4. FINANCIAL MANAGEMENT

3.4.1 Financial plan (by component, outputs and co-financier)

374. The total cost of project will be USD 19,896,238, to be financed through a GEF grant of USD 4,605,680 and USD 15,290,558 as cofinancing from FAO, ACIAR, VANGO, Live and Learn, the Pacific Community (SPC), the Government of Vanuatu and the New York Botanic Gardens (NYBG). The table below shows the cost by component and by sources of financing. The FAO will, as the GEF Agency, will be responsible for the execution of the GEF resources and the FAO cofinancing.

Table 9. Summary of Project Financials

	FAO	ACIAR	VANGO	Live and Learn	SPC	Government of Vanuatu	NYBG	Sub-total cofinancing	GEF	Total
1: Improving the enabling environment for integrated sustainable land and coastal management.						1,364,242		1,364,242	410,924	1,775,166
2: Integrated ridge to reef management in priority island localities	1,521,428	544,301	623,810	19,048	1,290,092	7,042,709	394,710	11,436,098	3,444,675	14,880,773
3: Knowledge management	169,047					1,593,049		1,762,096	530,762	2,292,858
PMC	84,525	27,215	31,190	952	64,505	500,000	19,735	728,122	219,319	947,441
	1,775,000	571,516	655,000	20,000	1,354,597	10,500,000	414,445	15,290,558	4,605,680	19,896,238

GEF inputs

375. The requested GEF grant resources totalling USD 4,605,680 will be allocated mainly in support of capacity development, policy and legal studies and preparation of normative instruments, technical assistance for technical studies, preparation of policies and plans, and finding technical and social solutions for sustainable forest and land management and PA management linked with community livelihoods. GEF resources will also be used for financing publications for awareness raising and education on BD, LD, CCM, IW, SFM and PA management best practices and will support community based livelihood enhancement activities.

Government inputs

376. Government co-financing will consist of USD10,000,000 grant and USD500,000 in-kind. The nature of the grant element is shown in Table 10.

Table 10. Breakdown of Vanuatu Government co-financing (grant element)

Institution/project	Brief description of cofinanced activities
Ministry of Lands and Natural Resources (USD1,000,000)	<ul style="list-style-type: none">- Land lease registration- Research and awareness raising on environmental issues- Registration and assistance to Community Conservation Areas (CCAs)- Promotion of domestic energy resources- Management and monitoring of water resources- Development and implementation of land-use policy and guidelines
Ministry of Agriculture, Quarantine, Forestry and Fisheries (USD2,000,000)	<ul style="list-style-type: none">- Forestry extension, including provision of planting materials for reforestation- Agricultural and fisheries extension activities- Management of terrestrial and marine protected areas- Development of marine hatcheries- Research and training in agriculture, forestry and fisheries
Ministry of Trade, Tourism, Commerce and Industry (USD2,000,000)	<ul style="list-style-type: none">- Tourism promotion and development- Promotion of processing and manufacturing (with a focus on agro-processing)
Ministry of Internal Affairs (Department and Provincial Governments) (USD2,000,000)	<ul style="list-style-type: none">- Governance- Rural livelihood development- Community resources management
Ministry for Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management (USD3,000,000)	<ul style="list-style-type: none">- Climate Change monitoring and reporting- Implementation and overseeing of mitigation and adaptation activities- Community environment and resources management- Development and implementation of community resilient activities- Research and implementation of clean energy- Support to building resilient communities

377. Additionally, the Government in-kind co-financing will mainly consist of staff time, office time and utilities, and support for local travel.

378. Apart from the financial contributions from the government, the long term success of

the project will ultimately depend on the commitment of the government to translate project outputs into outcomes, by mobilizing local support for the project's objectives and working in partnership across departments and with others outside government. Participants in project preparation activities and consultations have indicated their willingness to do this and support the policy, legislation and institutional arrangements anticipated due to the implementation of the proposed project.

FAO inputs

379. FAO will contribute USD1,775,000 cofinancing to the project. The Grant will be provided in the form of a Technical Cooperation Programme (TCP) formulated under the FAO's Pacific Programme Framework. The TCP assistance will address issues and impacts of loss of biodiversity, forest cover and sustained agriculture, livestock, fisheries and forestry production and use and include:

- National capacity building to assess, monitor and report on use and management of biodiversity and forest resources;
- Consultation meetings to address poor practices in agriculture, fisheries, forestry and livestock including studies and field activities to enhance sustainable production;
- Assessment of opportunities for diversifying livelihoods and dependency on existing limited coastal, lowland and uphill resources;
- Reviews and development of policy and legal frameworks promoting and supporting sustainable use, development and management of marine and terrestrial resources.

Departments FAO is working with and supporting	Baseline Activities supporting	FAO current CPF funds 2017 and new CPF 2018- 2022 (USD)	Other FAO Funds (USD)
1. Agriculture	Agriculture crop production; capacity building; building resilience; smart climate change and best agriculture practices; Policy legal framework	500,000	
2. Forestry	Forest harvesting, monitoring and reporting; forest inventory; native forest mgt; Trees Outside Forest (TOF) development mgt; PA mgt and botanical collection and reporting	400,000	UNREDD 375,000
3. Fisheries	Coastal fisheries development, use and management; Assessment, monitoring and reporting	300,000	
4. Livestock	Animal health surveillance; small livestock breeding improvement; pastures improvement;	200,000	
5. Quarantine and Biosecurity	Invasive species control and management; pest and disease surveillance;	80,000	
	Sub-total	(a) 1,400,000	(b) 375,000
	Total (a+b)	USD 1,775,000	

380. FAO will also provide technical assistance, support, training and supervision of the execution of activities financed by GEF resources. As the executing agency of the project, FAO will draw on its wide range of in-house expertise in forest and land management, forest

conservation and community-based approaches to resource management, to support the proposed project. The project will also benefit from FAOs past experience of working with countries in the Pacific on forest policy reform, national forest programmes, forest assessment, forest financing and small-scale enterprise development. In addition to the technical support from FAO Head Quarters in Rome and the Regional Office at Bangkok, FAO will provide local technical support to the project from its network on forestry, natural resource management and gender mainstreaming experts in the Pacific region and its technical staff in the FAO Sub-regional office for the Pacific.

381. Additionally, an interdivisional Project Task Force (PTF) will be established to oversee and advise the project, comprising experts in the areas of forest conservation, forest financing; community forestry; sustainable land and forest management; and environmental law. This expertise will be used mostly to provide technical backstopping, with national and regional consultants providing the majority of technical assistance on the ground.

Co-financing inputs from other sources

- ACIAR will provide an estimated USD571,516, in the form of its support to the Vanuatu element of its regional project Enhancing value added products and environmental benefits from agroforestry systems in the Pacific”, which will contribute in concrete terms to Outcome 2.4 through the funding of actions by partners aimed at exploring opportunities for new value-added agroforestry products to improve livelihoods (see Section 3.1.2).
- VANGO members will provide between them an estimated USD655,000 (of which USD600,000 will be cash) in the form of the initiatives implemented by them in support of community development and natural resource management in and around the project’s target localities.
- Live and Learn will provide USD20,000 in-kind contribution to co-financing, contributing to Component 2 activities.
- NY Botanical Garden has been collaborating on a partnership project with the Government of Vanuatu during the years 2012-2016, and has also been awarded a four-year grant from the U.S. National Science Foundation (NSF) for a project entitled “Collaborative Research: Plant, Fungal and Linguistic Diversity of Tefea Province, Vanuatu (NSF award #1555657),” to commence July 1, 2016. Grant co-financing is identified in the amount of USD414,445, representing funds expected to be received from the NSF and expended by NYBG inasmuch as they overlap with the duration of the GEF project duration anticipated in years 2016-2020, and contributes to Component 2.

3.4.2 Financial management and reporting

Financial Records

382. FAO shall maintain a separate account in United States dollars for the project’s TF resources showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the project in accordance with its regulations, rules and directives.

Financial Reports

383.FAO – AO as the BH shall prepare six monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

- 1) Details of project expenditures on a component-by-component and output basis, reported in line with project budget codes as set out in the Project Document, as at 30 June and 31 December each year.
- 2) Final accounts on completion of the project on a component and output-by-output basis, reported in line with project budget codes as set out in the Project Document.
- 3) A final statement of account in line with FAO Oracle project budget codes, reflecting actual

384.The Budget Holder will submit the financial reports for review and monitoring by the FAO GEF Coordination Unit. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division (CSFE).

Budget Revisions

385.Semi-annual budget revisions will be prepared by the BH in consultation with the FAO Representation in Samoa in accordance with FAO standard guidelines and procedure.

Responsibility for Cost Overruns

386.The Budget Holder is authorized to enter into commitments or incur expenditures up to a maximum of 20 percent over and above the annual amount foreseen in the project budget under any budget sub-line provided the total cost of the annual budget is not exceeded.

387.Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget subline over and above the 20 percent flexibility should be discussed with the FAO GEF Coordination Unit with a view to ascertaining whether it will involve a major change in project scope or design. If it is deemed to be a minor change, the BH shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Secretariat.

388.Savings in one budget subline may not be applied to overruns of more than 20 percent in other sublines even if the total cost remains unchanged, unless this is specifically authorized by the FAO GEF Coordination Unit upon presentation of the request. In such a case, a revision to the project document amending the budget will be prepared by the BH.

389.Under no circumstances can expenditures exceed the approved total project budget for the GEF resources or be approved beyond the NTE date of the project. Any over-expenditure is the responsibility of the BH.

Audit

390.The project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

391.The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the governing bodies of the Organization and reporting directly to them, and an internal audit function headed by the Inspector- General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by

senior management, and furthermore has a reporting line to the governing bodies. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

3.4.3 Procurement

392. The Budget Holder, in close collaboration with the Project Coordinator, the Lead Technical Officer and the Budget and Operations Officer will procure the equipment and services provided for in the detailed budget in Appendix 3, and in line with the Annual Work Plan and Budget and in accordance with FAO's rules and regulations.

393. Prior to the commencement of procurement, the BH, in close consultation with the Project Coordinator, shall complete the procurement plan for all services and equipment to be procured by FAO.

394. The procurement plan shall be updated every 12 months and submitted to and cleared by the FAO BH and LTO with the AWP/B and annual financial statement of expenditures report for seeking the next instalment of funds.

395. Monitoring and evaluation of progress in achieving project results and objectives will be done based on the targets and indicators established in the Project Results Framework (Appendix 1 and described in section 2.3 and 2.4). Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The monitoring and evaluation system will also facilitate learning and replication of project results and lessons in relation to integrated management of natural resources.

SECTION 4 – MONITORING, REPORTING AND EVALUATION

4.1 Oversight and monitoring responsibilities

396. The monitoring and evaluation roles and responsibilities specifically described in the Monitoring and Evaluation Plan (see below) will be undertaken through: (i) day-to-day monitoring and project progress supervision missions (Project Monitoring and Evaluation specialist (PMES) and PM); (ii) technical monitoring of indicators to measure the introduction of technologies for integrated natural resources management and project areas and the surface covered by conservation agreements and management plans (NPD in coordination with local organizations and other project stakeholders; (iii) specific monitoring plans for implementation of good practices (component 2); (iv) mid-term and final evaluations (independent consultants and FAO Evaluation Office); and (v) monitoring and supervision missions (FAO).

397. At the initiation of project implementation, the PMES will set up a project progress monitoring system. Participatory mechanisms and methodologies for systematic data collection and recording will be developed to support outcome and output indicator monitoring and evaluation. During the inception workshop (see section 4.5.3 below), M&E related tasks to be addressed will include: (i) presentation and clarification (if needed) of the Project Results Framework with all project stakeholders; (ii) review of the M&E indicators and their baseline; (iii) drafting the required clauses to include in consultants' contracts to ensure they complete their M&E reporting functions (if relevant); and (iv) clarification of the respective M&E tasks among the Project different stakeholders. One of the main outputs of the workshop will be a detailed monitoring plan agreed to by all stakeholders based on the monitoring and evaluation plan summary presented in section 4.5.4 below.

398. The day-to-day monitoring of the Project implementation will be the responsibility of the NPD and the PTC and will be driven by the preparation and implementation of an AWP/B followed up through six-monthly PPRs. The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project stakeholders. As tools for results-based-management (RBM), the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with all stakeholders and coordinated through the NPD and facilitated through project planning and progress review workshops. These contributions will be consolidated by the PTC in the AWP/B draft and the PPRs.

399. An annual project progress review and planning meeting should be held with the participation of the Project Management Committee to finalize the AWP/B and the PPRs. Once finalized, the AWP/B and the PPRs will be submitted to the Project Steering Committee for approval (AWP/B) and revision (PPR) and to FAO for approval. The AWP/B will be developed in a manner consistent with the Project Results Framework to ensure adequate fulfillment and monitoring of project outputs and outcomes.

400. Following the approval of the Project, the PY1 AWP/B will be adjusted (either reduced

or expanded in time) to synchronize it with the annual reporting calendar. In subsequent years, the AWP/Bs will follow an annual preparation and reporting cycle as specified in section 4.5.3 below.

4.2 Indicators and information sources

401. To monitor project outputs and outcomes including contributions to global environmental benefits, specific indicators have been established in the Project Results Framework (see Appendix 1). The Project Results Framework indicators and means of verification will be applied to monitor both project performance and impact. Following FAO monitoring procedures and progress reporting formats, data collected will be sufficiently detailed that can track specific outputs and outcomes, and flag project risks early on. Output target indicators will be monitored on a six-monthly basis, and outcome target indicators will be monitored on an annual basis, if possible, or as part of the mid-term and final evaluations.

402. The project output and outcome indicators have been designed to monitor biophysical and socio-economic impacts and progress in building and consolidating capacities for conservation and sustainable use of biodiversity, integrated management of natural resources and sustainable forest management, at both at the political-legal level as well as at the productive level, among small farmer communities that conserve and use the natural resources for their food security, maintenance of ecosystems and cultures, and generation of economic benefits indicators will monitor:

403. The main information sources to support the M&E plan include: i) Government and other project partners' monitoring systems; ii) participatory workshops with stakeholders and beneficiaries to review project progress; iii) on-the-ground monitoring of good practices, sustainable forest management, and agro-ecosystem management; iv) progress reports prepared by the PTC with inputs from the partners, project specialists and other stakeholders; v) consultants' reports; vi) training reports; viii) mid-term review and final evaluation; viii) financial reports and budget revisions; ix) Project Implementation Reviews prepared by the FAO LTO supported by the FAO Representation in SAP; and x) FAO supervision mission reports.

4.3 Reporting schedule

404. Specific reports that will be prepared under the monitoring and evaluation program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) Annual Project Implementation Review (PIR); (v) Technical reports; (vi) Co-financing reports; and (vii) Terminal Report. In addition, assessment of the GEF BD, SFM and LD Tracking Tools (TTs) against the baseline (completed during project preparation) will be required at mid-term and final project evaluation.

405. **Project Inception Report.** After FAO approval of the project an inception workshop will be held. Immediately after the workshop, the PM will prepare a project inception report in consultation with the LTO and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed first year AWP/B, a detailed project monitoring plan based on the monitoring and evaluation plan summary presented in section 4.5.4 below. The draft inception report will be

circulated to FAO, the Project Steering Committee for review and comments before its finalization, no later than three months after project start-up. The report will be cleared by the FAO BH, LTU and the FAO GEF Coordination Unit, and uploaded in FPMIS.

406. Annual Work Plan and Budget (AWP/B). The PM, under the supervision of the NPD, will submit to the Project Steering Committee a draft AWP/B no later than 10 January of each year. The AWP/B should include detailed activities to be implemented by project outputs and divided into monthly timeframes and targets and milestone dates for output indicators to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The FAO LTO will circulate the draft AWP/B to the FAO interdisciplinary Project Task Force and will consolidate and submit the FAO comments to the PTC, who will incorporate the comments of the Management Committee. The final AWP/B will be sent to the Project Steering Committee for approval and to the FAO for final no-objection and upload in FPMIS by the FAO LTO.

407. Project Progress Reports (PPR). The PM, under the supervision of the NPD, PMU will prepare six-monthly PPRs and submit them to the Project Steering Committee for their approval before submission to FAO Representation in SAP no later than July 31 (covering the period January through June) and 31 January (covering the period July through December). The first semester six months report should be accompanied by the updated AWP/B, if needed, for review and no-objection by FAO. The PPR are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the project's Results Framework (Appendix 1). Each semester, the FAO PTM will review the PPR, collect and consolidate eventual comments by the FAO (BH, LTO, FAO-GEF Coordination Unit) and provide these comments to the PTC. When comments have been duly incorporated the BH and the LTO will give final approval and submit the final PPR to the FAO-GEF Coordination Unit for final clearance and upload in FPMIS.

408. Annual Project Implementation Review (PIR). The LTO supported by the FAO GO and with inputs from the PTC, will prepare an annual Project Implementation Review covering the period July (the previous year) through June (current year) to be submitted to the BH and the FAO-GEF Coordination Unit for review and approval no later than 31 July. The FAO-GEF Coordination Unit will upload the final report on FPMIS and submit it to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The FAO-GEF Coordination Unit will provide the updated format when the first PIR is due.

409. Technical Reports. Technical reports will be prepared as part of project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the PM to the PSC and the LTO for review and clearance and to the FAO-GEF Coordination Unit for information and eventual comments, prior to finalization and publication. Copies of the technical reports will be distributed to the Project Steering Committee and other project partners as appropriate. The final reports will be posted on the FAO FPMIS by the FAO PTM.

410. Co-financing Reports. The PM will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by all the project cofinanciers and eventual other new partners not foreseen in the Project Document. Every year, the PM will

submit the report to the FAO Representation in Ecuador before 31 July covering the period July (the previous year) through June (current year).

411. **GEF Tracking Tools.** Following the GEF policies and procedures, the tracking tools for the BD, SFM/REDD+ and LD focal areas will be submitted to the GEF Secretariat at three moments: (i) with the project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the project's terminal evaluation.

412. **Terminal Report.** Within two months before the end date of the project, the PM will submit to the NPD and the LTO a draft Terminal Report. The main purpose of the final report is to give guidance to authorities (ministerial or senior government level) on the policy decisions required for the follow-up of the Project, and to provide the donor with information on how the funds were utilized. The terminal report is accordingly a concise account of the main **products, results, conclusions and recommendations** of the Project, without unnecessary background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for ensuring sustainability of project results. Work is assessed, lessons learned are summarized, and recommendations are expressed in terms of their application to the integrated landscape management in Tonga in the context of the development priorities at national and local levels, as well as in practical execution terms. This report will specifically include the findings of the final evaluation as described in section 4.6 below. A final project review meeting should be held to discuss the draft terminal report with the Project Steering Committee before it is finalized and approved by the BH, LTO and the FAO-GEF Coordination Unit.

4.4 Monitoring and evaluation plan summary

413. The below provides a summary of the main monitoring and evaluation reports, responsible parties and timeframe:

Table 11. Summary of the Main Monitoring and Evaluation Activities.

Type of Activity	Responsible Parties	Time-frame	Budget
Inception Workshop	NPD, PM, FAO (BH and LTO, and GEF Coordination Unit)	Within two months of project start up	USD 2,000 and FAO cost covered by agency fee
Project Inception Report	NPD and PM, cleared by LTO, BH, and the FAO GEF Coordination Unit	Immediately after the workshop	Project staff covered by co-financing and FAO cost covered by fees
Field-based impact monitoring	PM, institutions and pilot villages communities, and farmers participating in the project	Continually	USD10,800 (9% of project coordination time, technical workshops for identification of indicators, M&E workshops)
Supervision visits and rating of progress in PPRs and PIRs	PM, LTO and other technical units supporting the project, TCI/GEF Coordination Unit	Annual or as required	FAO visits will be financed through GEF agency fee. Project coordination visits will be financed by the project travel budget

Type of Activity	Responsible Parties	Time-frame	Budget
Project Progress Reports (PPR)	PM with inputs from; FAO LTO and BH; BH to submit PPR to GEF Coordination Unit for clearance and uploading on FPMIS	Six-monthly	Included in salary of project manager; inputs from FAO will be covered by fee
Project Implementation Review (PIR) report	FAO LTO and PM supported by the NPD and PSC. PIRs cleared and submitted by the FAO GEF Coordination Unit to the GEF Secretariat	Six-monthly	Covered by project staff time & agency fee
Co-financing Reports	PMO, LTO, and BH	Annual (with PIR)	Covered by project staff time & agency fee
Technical reports	PM, LTO, BH	As appropriate	Included in cost of consultants and budget for information supplies, co-financing, etc.
Mid-term Evaluation	FAO Office for Evaluation to recruit external consultants; evaluation conducted with inputs from the project stakeholders and the project team including the FAO GEF Coordination Unit, the LTO, BH	At mid-point of project implementation	USD 50,000 for two independent consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Final evaluation	FAO Office for Evaluation to recruit external consultants; evaluation conducted with inputs from the project stakeholders and the project team including the FAO GEF Coordination Unit, the LTO, BH	At the end of project implementation	USD 50,000 for two independent consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Terminal Report	PMO, BH, LTO, TCSR	At least two months before the ending date of the project	Included in salary of project manager; inputs from FAO will be covered by fee
Total Budget			USD112,800

4.5 PROVISION FOR EVALUATIONS

414. An independent Mid-Term Evaluation (MTE) will be undertaken at the end of the first 24 months of project implementation to review progress and effectiveness of implementation in terms of achieving project objective, outcomes and outputs. Findings and recommendations of this review will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term if necessary. FAO (the Office of Evaluation) will arrange for the MTE in consultation with project management. The evaluation will, *inter alia*:

- a) Review the effectiveness, efficiency and timeliness of project implementation;
- b) Analyse effectiveness of partnership arrangements;

- c) Identify issues requiring decisions and remedial actions;
- d) Propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
- e) Describe the technical achievements and lessons learned derived from project design, implementation and management.

415. An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting. The FE will aim to identify the project impacts, sustainability of project results and the degree of achievement of long-term results. The FE will also have the purpose of indicating future actions needed to expand on the existing Project in subsequent phases, mainstream and up-scale its products and practices, and disseminate information to management authorities and institutions with responsibilities in food security, conservation and sustainable use of natural resources, small farmer agricultural production and ecosystem conservation to assure continuity of the processes initiated by the Project. Critical elements that both the MTR and FE will pay special attention to are the outcome indicators.

4.6 COMMUNICATION

416. Communication and visibility are of crucial importance to the success of this project, because the project strategy will be to mobilize public, and community support to adoption of sustainable integrated ecosystem approach for sustainable economic and livelihood development. Giving high visibility to the project and ensuring effective communications in support of the Project's message it to be addressed through a number of activities that have been incorporated into the Project design. These include: (i) the recruitment of a Communications & knowledge management specialist to assist the PMU staff member responsible (inter alia) for communications and knowledge management; (ii) the preparation of documents and communication tools that capture the Project's economic, ecological and social benefits; (iii) the official launching of project need high level commitment from Government, (iv) community training to raise awareness and lobby for active participation, and; (iv) several awareness raising activities and media programs

417. A full communication plan and strategy will be drawn during project inception by the Communications & knowledge management expert. This communication will take place at three levels:

- In the local communes by Government and Communities and NGOs
- In the regions and within the platforms to be boosted in the context of the project by the PMU with the support of partner organisations;
- At national and international level in order to obtain financial and political support by the PMU, MAFFF, MLNSR, FAO, MORDI, SPC and other members of the PSC

418. The project budget includes the resources for a short-term communications specialist and the development of communication plan, and provision for project awareness program and activities. These inputs and activities will be integrated into the Project Work plan, and, as such, will come out of the Project's technical activities rather than be stand-alone activities.

419. Four target audiences have been identified for communications from the project and activities to increase the visibility of the project. Specific strategies and products will be developed to ensure that all the four groups are reached. The objectives for communication

with these audiences and an outline of proposed communication activities are presented below.

Project partners and others working on environmental issues in Vanuatu

420. Effective communication with project partners and others working on environmental issues will be essential for effective implementation of the project. Communications with partners will occur during regular project meetings (Project Steering Committee meetings) using existing coordination mechanisms if any.

421. The project also includes a number of technical workshops and consultations at the national level to review and assess activities and outputs of the project and discuss how they can be translated into long-term outcomes. Most of the project components include at least one national workshop or consultation to discuss technical aspects of major thematic topics (e.g. policy and legal reform, financing strategies, options for sustainable rural development and income generation).

422. In addition to these face-to-face communications, a project website will be developed where documents can be stored and shared with project partners, regional initiatives and general public. This website will also be used to streamline communications among partners and develop project activities (e.g. online development of technical material using a “wiki”) and assist with project monitoring and evaluation. The website will operate for the duration of the project and will operate in addition to long-term communication activities (for outputs of more lasting value - see below).

423. The Chief Technical Advisor and National Project Coordinator will be responsible for maintaining regular and effective communications with these groups and the cost of this is included in the budget for their salaries. FAO will provide assistance to establish and maintaining the project website (as a co-financing contribution to the project).

Local communities in protected areas

424. Experience has shown that the development and implementation of participatory approaches in any area of natural resource management requires a concerted and long-term effort to communicate with local people. The project includes a substantial number of consultations and activities in the field (mostly under Component 1,2, and 4) to work with communities, listen to and understand their concerns and aspirations, come to a consensus about proposed activities and maintain regular contact to monitor progress and address any issues that might arise during project implementation. These face-to-face communications will be the major vehicle for communication with this audience. In addition, under all the Components, some demonstration and small-scale pilot activities will be implemented to test the feasibility of various activities and present the results to local people. Local NGOs and government staff (e.g. extension officers) will implement most of these communication activities (as a co-financing contribution), with technical support from project staff and short-term consultants (funded by the project). The costs of demonstration and small-scale pilot activities will be shared between these groups in a similar way.

The general public

425. Communication with the general public will be important to generate wider support for the aims and objectives of this project, as well as to communicate broader messages about the importance of conservation and sustainable development and about how the public can support sustainable development in their day to day life.

426. The project includes specific activities for information dissemination and awareness raising which includes the production and dissemination of materials about biodiversity conservation, climate change, International Waters, Land degradation, SLM and SFM and the installation of interpretative facilities in some of the protected areas that will be created. School children will be a particular focus of these awareness raising activities and the project will support environmental education by producing educational materials and holding events targeted at this particular group. Other awareness raising activities will include the production of posters and leaflets and broadcasts on local television and radio.

427. The National Project Coordinator and the Chief Technical Advisor will be responsible for ensuring that the project communicates effectively with the general public with assistance from short-term consultants for some of the technical aspects of these communication activities.

Regional and global stakeholders with an interest in the environment

428. The objective of communication with this group will be to meet the international commitments of Vanuatu (e.g. to report to international agencies and conventions) and to share lessons learned and knowledge generated on the project with others outside the country and within the Pacific region that may find this useful. Communications with this group will include the following:

- production of regular national reports to international agencies and conventions;
- further development and maintenance of online database and websites by the national governments;
- sharing important project reports with other relevant FAO and GEF projects in the region;
- production of high-quality technical publications of lasting value (to be stored on national websites and in the FAO Document Repository); and
- participation in regional and international technical workshops and conferences.

429. Government staff will be responsible for the first two items above and project staff will be responsible for the third item. To ensure a high level of quality control and selectivity, the Project Steering Committee and FAO will assess and discuss the merits of major technical outputs of the project to determine how to proceed with the latter two forms of communication. Resources for all of these activities are included under Components 5.

ANNEX 1: RESULTS MATRIX

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target	End of Project Target	Means of Verification	Assumptions
Objective: To test and implement sustainable and integrated management of forest, land and marine resources to achieve effective ridge-to-reef (R2R) conservation in selected priority watersheds in Vanuatu						
Component 1: Improving the enabling environment for integrated sustainable land and coastal management.						
1.1 Integrated R2R considerations mainstreamed into sector development policies	Indicator 1.1.1: Degree of commitment in policy instruments for channeling tourism income to environmental management	Generalised policy statements exist, but in different sector policy documents and without specific commitments	Proposals under discussion of specific commitments for promoting the channeling of tourism income to environmental management	Tourism policy makes specific commitments for promoting the channeling of tourism income to environmental management	Review of policy documents	Continued Government commitment to ensuring economic development is combined with environmental and social sustainability
	Indicator 1.1.2: Degree of commitment in policy instruments for promoting compatibility between agricultural development and the maintenance of ecosystem goods and services	Several sector policies example agriculture, forestry, land and livestock make broad reference to maintenance of ecosystem goods and services but without specific definitions or commitments	Proposals under discussion of specific commitments for promoting compatibility between agricultural development and maintenance of ecosystem goods and services	Agriculture, livestock, forestry and planning policy documents include specific commitments for promoting compatibility between agricultural development and maintenance of ecosystem goods and services	Review of policy documents	
	Indicator 1.1.3: Degree of commitment in policy instruments for	Existing Fisheries and Environment policies make generalized references, but lack a vision of inter-sector	Proposals under discussion of specific commitments for protection of coastal and marine ecosystems through ICZM approaches	Fisheries and planning policy documents include specific commitments for protection of coastal and marine ecosystems through ICZM	Review of policy documents	

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target	End of Project Target	Means of Verification	Assumptions
	protection of coastal and marine ecosystems through ICZM approaches	integration		approaches		
Output 1.1.1: Policy proposals for channelling tourism income to environmental management Output 1.1.2: Policy proposals for promoting compatibility between agricultural development and maintenance of ecosystem goods and services Output 1.1.3: Policy proposals in support of ICZM including protection of coastal and marine ecosystems on which fisheries sustainability and marine biodiversity depend						
1.2 Environmental planning and decision-making processes take integrated R2R considerations into account	Indicator 1.2.1: Percentage of EIAs that specifically address landscape-wide environmental and social dynamics	All EIAs are site-specific with little or no consideration of landscape-wide dynamics	EIA procedures specifically require consideration of landscape-wide environmental and social dynamics	50% of EIAs specifically address landscape-wide environmental and social dynamics	Review of EIA reports and statements	Political will and resources to apply planning and decision-making instruments
	Indicator 1.2.2: Percentage of planning determinations nationwide that specifically address landscape-wide environmental and social dynamics	No planning decisions to date have adequately considered landscape-wide dynamics	Planning determinations are required to specifically address landscape-wide environmental and social dynamics	50% of planning determinations nationwide that specifically address landscape-wide environmental and social dynamics	Review of planning determinations	
	Output 1.2.1: Improved procedures for approving lease applications Output 1.2.2: Improved capacities and regulatory instruments for consideration of landscape-wide (ridge to reef) considerations into EIAs and determinations					

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target	End of Project Target	Means of Verification	Assumptions
	Output 1.2.2: Land use planning guidelines providing for consideration of landscape-wide (ridge to reef) environmental and social processes					
1.3: Increased financial resources channelled from the tourism sector to environmental conservation and PA management	Indicator 1.3.1: Amount of financial resources channelled from the tourism sector to environmental conservation and PA management	No reliable figures available, but assumed to be negligible	\$75,000/year channelled from the tourism sector to environmental conservation and PA management by project end	\$150,000/year channelled from the tourism sector to environmental conservation and PA management by project end ⁶⁶	Interviews with tourism sector actors and Department of Tourism	Political commitment to negotiation with cruise industry Commitment of cruise industry to corporate responsibility Maintenance of tourism levels
	Output 1.3.1: Corporate social and environmental responsibility commitments from the cruise industry					
Component 2: Integrated ridge to reef management in priority island localities						
2.1 Target landscapes subject to integrated R2R planning and governance	Indicator 2.1.1: Area in target localities covered by integrated landscape/ seascape management plans developed and implemented by local landowners	0 ha		100,000ha in target localities covered by integrated landscape/ seascape management plans developed and implemented by local landowners	Review of plans	Commitment of stakeholders to resolving environmental issues through dialogue
	Indicator 2.1.2: Levels of satisfaction with multi-stakeholder	No surveys yet carried out of satisfaction with existing decision-making structures	At least 30% of stakeholders in all categories consider that the mechanisms adequately represent them and address	At least 75% of stakeholders in all categories consider that the mechanisms adequately represent them and address	Stakeholder surveys/focus groups	

⁶⁶ Cruise companies, their passengers and crew spent AUS\$34.6 million (US\$25 million) in Vanuatu in 2013. Using a conservative assumption of growth to \$30 million/year, \$150,000/year would be 0.5% of total spending.

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target	End of Project Target	Means of Verification	Assumptions																
	mechanisms among stakeholders in target localities, by category (chiefs, other village members)		their needs.	their needs.																		
	Indicator 2.1.3: Proportion of land area in target localities where management decisions (leases, land use changes) coincide with provisions of R2R plans, norms and recommendations of local dialogue mechanisms	No relevant provisions have as yet been generated through R2R plans, norms and dialogue mechanisms	On at least 40% of the land affected by management decisions (leases, land use changes) between project mid-term and end, the decisions coincide with provisions of R2R plans, norms and recommendations of local dialogue mechanisms	On at least 80% of the land affected by management decisions (leases, land use changes) between project mid-term and end, the decisions coincide with provisions of R2R plans, norms and recommendations of local dialogue mechanisms	Review of outcomes of management decisions																	
Output 2.1.1: Multi-stakeholder mechanisms for landscape planning, decision-making and conflict management covering all three target localities																						
Output 2.1.2: Norms for resource management practices developed and agreed among stakeholder groups covering target localities																						
Output 2.1.3: Integrated landscape/seascape management plans developed and implemented by local landowners																						
2.2 Farmers, ranchers and fishers are managing resources sustainably, resulting in	Indicator 2.2.1: Increase in area (ha) in target localities over which sustainable hillside farming practices are	Approximately 13,250ha under cultivation with traditional farming practices @1ha worked/year/family	Area with improved farming practices: <table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>62</td></tr><tr><td>Middle Bush Tanna</td><td>1,250</td></tr><tr><td>N. Efate</td><td>1,250</td></tr></table>	Locality	ha	SW Aneityum	62	Middle Bush Tanna	1,250	N. Efate	1,250	Area with improved farming practices: <table><tr><th>Locality</th><th>ha⁶⁷</th></tr><tr><td>SW Aneityum</td><td>125</td></tr><tr><td>Middle Bush Tanna</td><td>2,500</td></tr><tr><td>N. Efate</td><td>2,500</td></tr></table>	Locality	ha ⁶⁷	SW Aneityum	125	Middle Bush Tanna	2,500	N. Efate	2,500	Focus groups, farmer interviews and field inspections	Recognition by local stakeholders of the need to address environmental issues
Locality	ha																					
SW Aneityum	62																					
Middle Bush Tanna	1,250																					
N. Efate	1,250																					
Locality	ha ⁶⁷																					
SW Aneityum	125																					
Middle Bush Tanna	2,500																					
N. Efate	2,500																					

⁶⁷ Assumes 0.5ha/family with sustainable hillside farming practices

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target		End of Project Target		Means of Verification	Assumptions																							
improved flows of ecosystem goods and services, as a result of increased capacities and awareness	applied		S. Pentecost	750	S. Pentecost	1,500		Economic and demographic pressures do not exceed the coping limits of the resource management practices Climate change does not exceed the coping limits of the resource management practices																							
			Total	3,312	Total	6,625																									
	Indicator 2.2.2: Increase in area (ha) in target localities over which sustainable hillside ranching practices are applied	N/A	Area with improved ranching practices: <table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>15</td></tr><tr><td>Middle Bush Tanna</td><td>25</td></tr><tr><td>N. Efate</td><td>250</td></tr><tr><td>S. Pentecost</td><td>10</td></tr><tr><td>Total</td><td>300</td></tr></table>		Locality	ha	SW Aneityum		15	Middle Bush Tanna	25	N. Efate	250	S. Pentecost	10	Total	300	Area with improved ranching practices: <table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>30</td></tr><tr><td>Middle Bush Tanna</td><td>50</td></tr><tr><td>N. Efate</td><td>500</td></tr><tr><td>S. Pentecost</td><td>20</td></tr><tr><td>Total</td><td>600</td></tr></table>		Locality	ha	SW Aneityum	30	Middle Bush Tanna	50	N. Efate	500	S. Pentecost	20	Total	600
	Locality	ha																													
	SW Aneityum	15																													
	Middle Bush Tanna	25																													
	N. Efate	250																													
	S. Pentecost	10																													
	Total	300																													
	Locality	ha																													
SW Aneityum	30																														
Middle Bush Tanna	50																														
N. Efate	500																														
S. Pentecost	20																														
Total	600																														
Indicator 2.2.3: Increase in area (ha) in target localities over which community-based fisheries regulations are effectively applied	N/A	<table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>100</td></tr><tr><td>Middle Bush Tanna</td><td>50</td></tr><tr><td>N. Efate</td><td>300</td></tr><tr><td>S. Pentecost</td><td>50</td></tr><tr><td>Total</td><td>500</td></tr></table>		Locality	ha	SW Aneityum	100	Middle Bush Tanna	50	N. Efate	300	S. Pentecost	50	Total	500	<table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>100</td></tr><tr><td>Middle Bush Tanna</td><td>50</td></tr><tr><td>N. Efate</td><td>300</td></tr><tr><td>S. Pentecost</td><td>50</td></tr><tr><td>Total</td><td>500</td></tr></table>		Locality	ha	SW Aneityum	100	Middle Bush Tanna	50	N. Efate	300	S. Pentecost	50	Total	500	Focus groups, interviews and field inspections	
Locality	ha																														
SW Aneityum	100																														
Middle Bush Tanna	50																														
N. Efate	300																														
S. Pentecost	50																														
Total	500																														
Locality	ha																														
SW Aneityum	100																														
Middle Bush Tanna	50																														
N. Efate	300																														
S. Pentecost	50																														
Total	500																														
Indicator 2.2.4: Reef health indices	To be determined at project start			10% improvement in index ratings in all sites (to be confirmed once baseline values are determined)																											
Indicator 2.2.5: Fish catch per unit of effort	To be determined at project start	5% increase		10% increase		Interviews with fishers																									
Indicator 2.2.6: Quantities of	Annual consumption (t): <table><tr><th>Locality⁶⁸</th><th>t</th></tr></table>	Locality ⁶⁸	t	Annual consumption (t): <table><tr><th>Locality</th><th>t</th></tr></table>		Locality	t	Annual consumption (t): <table><tr><th>Locality⁶⁹</th><th>t</th></tr></table>		Locality ⁶⁹	t	Focus groups, farmer																			
Locality ⁶⁸	t																														
Locality	t																														
Locality ⁶⁹	t																														

⁶⁸ Total fuelwood consumption in Vanuatu in 2007 = 937,203t. Assumed 40% increase to present day gives 1,312,084t, of which 30% (393,625t) is estimated to be for drying of agricultural crops. The target localities contain an estimated 0.09%, 1.84%, 1.84% and 1.10% respectively of the national population; adjusting fuelwood consumption by the same proportions gives an estimated fuelwood consumption of 361, 7,229, 7,229 and 4,337t respectively per locality.

⁶⁹ The introduction of solar driers is expected to reduce consumption of fuelwood for drying of agricultural crops by 10, 10, 20 and 10% respectively in the target localities.

Outcomes	Indicators	Start of Project Baseline		Mid-term project Target		End of Project Target		Means of Verification	Assumptions	
	firewood used for drying of copra and other agricultural products	SW Aneityum	361	SW Aneityum	343	SW Aneityum	325	interviews and field inspections		
		Middle Bush Tanna	7,229	Middle Bush Tanna	6,867	Middle Bush Tanna	6,506			
		N. Efate	7,229	N. Efate	6,506	N. Efate	5,783			
		S. Pentecost	4,337	S. Pentecost	4,120	S. Pentecost	3,904			
			19,156		17,836		16,518			
						Overall reduction in year 5 = 2,638t; total reduction over 5 years = 7,914t ⁷⁰ : total avoided emissions = 517tCO _{2eq}				
Output 2.2.1: Extension modules for agriculture, fisheries, livestock and forestry including integrated R2R concepts Output 2.2.2: Field schools and mechanisms for participatory learning and experimentation in target localities Output 2.2.3: Pilot solar driers for copra and other agricultural products										
2.3 Capacities for generation of ecosystem goods and services are permanently restored in priority areas affected by land degradation	Indicator 2.3.1: Area of degraded lands subject to restoration with direct project support, with resulting carbon benefits	0		ha			ha	Field inspections	Commitment to restoration among local stakeholders	
			SW Aneityum	100	SW Aneityum	200				
			Middle Bush Tanna	100	Middle Bush Tanna	200				
			N. Efate	100	N. Efate	200				
			S. Pentecost	100	S. Pentecost	200				
			Total	400	Total	800				
				With resulting carbon benefit from capture of 153,329tCO _{2eq} .						
Output 2.3.1: Ecosystem restoration programmes implemented in all three target localities										
2.4 Local people in target localities have opportunities and capacities to perceive	Indicator 2.4.1: Numbers of local people receiving economic benefits from sustainable ecotourism	TBD – a number of ecotourism ventures exist but little specific attention to sustainability		People	Total US\$		people	Total US\$	Focus groups and interviews with community members	Visitor numbers at adequate yet manageable levels Governance conditions in
			SW Aneityum	250	45,000	SW Aneityum	500	90,000		
			Middle Bush Tanna	50	30,000	Middle Bush Tanna	100	60,000		
			N. Efate	300	45,000	N. Efate				

⁷⁰ Assumes a linear annual increase in reductions (20, 40, 60, 80 and 100% respectively at the ends of years 1,2,3,4 and 5 = 528, 1,055, 1,583, 2,110 and 2,638t = 7,914t total).

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target			End of Project Target			Means of Verification	Assumptions										
direct benefits from conservation and sustainable land management			S. Pentecost	50	15,000	N. Efate	600	90,000		target communities										
						S. Pentecost	100	30,000												
			Total	650	150,000	Total	1,300	300,000												
	Indicator 2.4.2: Numbers of local people receiving economic benefits from sustainable NTFP extraction	TBD – handicrafts are currently produced but little specific attention to sustainability		People	Total US\$		People	Total US\$	Focus groups and interviews with community members											
			SW Aneityum	40	9,750	SW Aneityum	80	19,500												
			Middle Bush Tanna	30	6,500	Middle Bush Tanna	60	13,000												
			N. Efate	25	45,000	N. Efate	50	90,000												
			S. Pentecost	20	15,000	S. Pentecost	40	30,000												
			Total	115	32,500	Total	230	65,000												
			Indicator 2.4.3: Numbers of local people receiving economic benefits from sustainable PES schemes	0		People	Total US\$			People	Total US\$	Interviews and focus groups								
	SW Aneityum	15			7,500	SW Aneityum	30	15,000												
	Middle Bush Tanna	15			5,000	Middle Bush Tanna	30	10,000												
	N. Efate	20			7,500	N. Efate	40	15,000												
	S. Pentecost	10			2,500	S. Pentecost	20	5,000												
	Total	60			22,500	Total	120	45,000												
	Output 2.4.1: Ecotourism development plans formulated with local participation in each target locality, including carrying capacity studies Output 2.4.2: Ecotourism initiatives managed by local communities or with provision for generating significant benefits for local communities, including provisions for environmental sustainability Output 2.4.3: Plans and norms agreed by local stakeholders in each target locality for sustainable extraction and marketing of NTFPs, incorporating results of ecological studies.																			
2.5 Strengthened protected area network	Indicator 2.5.1: Increase in area coverage of PAs in target localities	Current PA areas: <table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>10</td></tr></table>	Locality	ha	SW Aneityum	10	Proposed additional areas: <table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>600</td></tr></table>		Locality	ha	SW Aneityum	600	Proposed additional areas: <table><tr><th>Locality</th><th>ha</th></tr><tr><td>SW Aneityum</td><td>2,600</td></tr></table>		Locality	ha	SW Aneityum	2,600	PA registers	Commitment to PAs in among local stakeholders
Locality	ha																			
SW Aneityum	10																			
Locality	ha																			
SW Aneityum	600																			
Locality	ha																			
SW Aneityum	2,600																			

Outcomes	Indicators	Start of Project Baseline		Mid-term project Target		End of Project Target		Means of Verification	Assumptions
in target localities, filling ecosystem coverage gaps and responding to overall R2R management plans		Middle Bush Tanna	10	Middle Bush Tanna	400	Middle Bush Tanna	1,000		
		N. Efate	3,715	N. Efate	600	N. Efate	600		
		S. Pentecost	4,277	S. Pentecost	800	S. Pentecost	800		
		Gaua	5,826						
		Total:	13,838	Total:	2,400	Total:	5,000		
	Indicator 2.5.2: Management effectiveness ratings of existing and new PAs in target localities	Mystery Island	52	Mystery Island	56	Mystery Island	85	Interviews with PA managers and community members	
		Central Aneityum (proposed)	1	Central Aneityum (proposed)	56	Central Aneityum (proposed)	85		
		SE Mystery Island MPA (proposed)	1	SE Mystery Island MPA (proposed)	56	SE Mystery Island MPA (proposed)	85		
		Numusetu	37	Numusetu	56	Numusetu	85		
		Proposed Tanna CCA	0	Proposed Tanna CCA	56	Proposed Tanna CCA	85		
		Proposed Tanna MPA	0	Proposed Tanna MPA	56	Proposed Tanna MPA	85		
		ELMA	24	ELMA	56	ELMA	85		
		Tanolu Marine CCAs	23	Tanolu Marine CCAs	56	Tanolu Marine CCAs	85		
		JICA Lelepa	36	JICA Lelepa	56	JICA Lelepa	85		
		Lelepa Island Tours	38	Lelepa Island Tours	56	Lelepa Island Tours	85		
		Proposed Efate CCA	0	New Efate CCA	56	New Efate CCA	85		
		Bay Homo CCA	24	Bay Homo CCA	56	Bay Homo CCA	85		
		Proposed Pentecost CCA	0	Proposed Pentecost CCA	56	Proposed Pentecost CCA	85		
		Lake Letas CCA	21	Lake Letas CCA	56	Lake Letas CCA	85		
		Average	18.4	Average	56	Average	85		
	Indicator 2.5.3: Area of buffer zones and corridors around and between PAs in target localities	Oha		15,000ha		30,000ha			

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target	End of Project Target	Means of Verification	Assumptions
	Output 2.5.1: MPA and CCA agreements negotiated and signed by government and local communities, with corresponding mapping and demarcation Output 2.5.2. MPA and CCA agreements negotiated and signed by government and local communities, with corresponding mapping and demarcation Output 2.5.3. Buffer zones and corridors established between and around CCAs and MPAs Output 2.5.4. International designations of PAs Output 2.5.5. Management plans for each PA, harmonized with provisions of overall landscape management plans Output 2.5.6: Local PA management committees, functioning with capacities for adaptive management					
2.6 Sustainable resource management and PA management supported by sustainable financing	Indicator 2.6.1: Annual income for PAs and ecosystems management in target localities	0	\$10,000 per year across the target localities	\$20,000 year across the target localities	Interviews with PA managers and community representatives	Commitment and governance in provincial Governments and community organisations
	Output 2.6.1: PA-specific financial management and investment plans Output 2.6.2: Local-level financial mechanisms in support of PA management and landscape restoration					
Component 3: Knowledge management						
3.1 Best practices and lessons learned are systematized and disseminated	Indicator 3.1.1: Numbers of decision-makers in key institutions reporting access to best practices and lessons learned as being useful	N/A		Directors of all key Government stakeholder institutions (departments)	Interviews	Openness among decision-makers to using information
	Output 3.1.1: Mechanisms for systematisation, dissemination and awareness raising					
3.2 Decision-making and planning are guided by information	Indicator 3.2.1: Proportions of lease application determinations in target localities	0	50%	100%	Interviews with Department of Lands, reviews of lease determinations	Openness among decision-makers to using

Outcomes	Indicators	Start of Project Baseline	Mid-term project Target	End of Project Target	Means of Verification	Assumptions
on trends in ecosystem conditions	that take into account monitoring data on ecosystem conditions					information
	Indicator 3.2.2: Proportions of EIAs in the target localities that take into account monitoring data on ecosystem conditions	0	50%	100%	Review of EIA reports and determinations	
	Output 3.2.1: Systems in provincial government offices for management of information on ecosystem conditions and trends, feeding data to local organisations in target localities Output 3.2.2: Functioning Measurement, Reporting and Verification (MRV) unit in the Department of Forestry					
3.3 Project management is subject to effective M&E that feeds back into adaptive management decisions.	Indicator 3.3.1:	N/A	All project indicators are measured in a timely and accurate manner and the results fed into adaptive management of the project	All project indicators are measured in a timely and accurate manner and the results fed into adaptive management of the project	Review of project M&E system	N/A
	Outputs: 3.3.1 Functioning project M&E system					

ANNEX 2: OUTCOME BUDGET

The Outcome based budget is provided in the embedded excel file below:



Vanuatu R2R
outcome budget_24

ANNEX 3: WORK PLAN (RESULTS BASED)

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Improving the enabling environment for integrated sustainable land and coastal management.																						
Outcome 1.1. Integrated R2R considerations mainstreamed into sector development policies																						
Output 1.1.1: Policy proposals for channelling tourism income to environmental management	1.1.1.1. Generation of study/guidance documents analysing the potential for the cruise-ship sector and community-based ecotourism to contribute to environmental management and conservation	Ministry of Climate Change		X	X																	
	1.1.1.2. Provision of ongoing advisory support in relation to the incorporation of provisions for cruise sector contributions and ecotourism				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
	1.1.1.3. Support to the Ministry of Tourism in the drafting of policy documents					X	X	X	X													
Output 1.1.2: Policy proposals for promoting compatibility between agricultural development and maintenance of ecosystem goods and services	1.1.2.1. Generation of study/guidance documents analysing the implications of current policies in the target sectors for the condition of global environmental values (GEVs),	Ministry of Climate Change		X	X																	
	1.1.2.2. Provision of ongoing advisory support to the target sector ministries in relation to the mainstreaming of GEVs in their policies, plans and operations				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
	1.1.2.3. Support to the target sector ministries in the drafting/modification of policy instruments making provision for the mainstreaming of GEVs				X	X	X	X														
Output 1.1.3: Policy proposals in support of ICZM including	1.1.3.1. Generation of study/guidance documents	Ministry of Climate Change		X	X																	
	1.1.3.2. Provision of ongoing advisory support to the target sector ministries in relation to the				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
protection of coastal and marine ecosystems on which fisheries sustainability and marine biodiversity depend	promotion of ICZM.																					
Outcome 1.2: Environmental planning and decision-making processes take integrated R2R considerations into account																						
Output 1.2.1. Improved procedures for approving lease applications	1.2.1.1. Review of current lease approval criteria and their implications	Ministry of Climate Change			X	X																
	1.2.1.2. Support to the drafting of improved lease approval criteria						X	X	X	X												
	1.2.1.3. Support to the piloting and validation of the application of the improved lease approval criteria										X	X	X	X	X	X	X	X	X	X		
Output 1.2.2. Improved capacities and regulatory instruments for consideration of landscape-wide (ridge to reef) considerations into EIA reports and determinations	1.2.2.1. Review of capacities and instruments for EIA in relevant institutions	Ministry of Climate Change			X	X																
	1.2.2.2. Formulation of capacity development plan, in consultation with all target institutions						X	X														
	1.2.2.3. Provision of advisory support for the improvement of EIA procedures and instruments, to DEC and other relevant institutions								X	X	X	X	X	X	X	X	X	X	X	X		
	1.2.2.4. Implementation of capacity development plan								X	X	X	X	X	X	X	X	X	X	X	X		
	1.2.2.5. Monitoring and follow-up support to capacities and functioning of instruments										X	X	X	X	X	X	X	X	X	X	X	X
Output 1.2.3. Land use planning guidelines providing for consideration of landscape-wide (ridge to reef) biological and social processes	1.2.3.1. Review of current land use planning guidelines and their implications	Ministry of Climate Change			X	X																
	1.2.3.2. Support to the drafting of improved land use planning guidelines						X	X	X	X												
	1.2.3.3. Support to the piloting and validation of the application of the improved land use planning guidelines										X	X	X	X	X	X	X	X	X	X		

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 1.3: Increased financial resources channelled from the tourism sector to environmental conservation and PA management																						
Output 1.3.1: Corporate social and environmental responsibility commitments from the cruise industry	1.3.1.1. Generation of study/guidance documents	Ministry of Climate Change		X	X																	
	1.3.1.2. Support to the Ministry of Tourism in the development of a negotiation strategy for interactions with cruise industry representatives,				X	X																
	1.3.1.3. Facilitation of negotiations with cruise industry representatives.						X	X	X	X	X	X	X	X								
	1.3.1.4. Support to the drafting and formalization of agreements										X	X	X	X								
	1.3.1.5. Ongoing monitoring and advisory support to the implementation of the agreements.														X	X	X	X	X	X		
Component 2: Integrated ridge to reef management in priority island localities																						
Outcome 2.1: Target landscapes subject to integrated R2R planning and governance																						
Output 2.1.1. Multi-stakeholder mechanisms for landscape planning, decision-making and conflict management covering all three target localities	2.1.1.1. Participatory discussion of proposals to improve planning and governance and establish or strengthen structures.	Ministry of Climate Change			X	X																
	2.1.1.2. Participatory review of existing social structures with implications for planning, decision-making and landscape management.					X	X	X	X	X												
	2.1.1.3. Participatory formulation of proposals for establishment or strengthening of multi-stakeholder mechanisms.						X	X	X	X												
	2.1.1.4. Facilitation of the establishment, strengthening and ongoing operation of the multi-stakeholder mechanisms.								X	X	X	X	X	X	X	X	X	X	X			
	2.1.1.5. Monitoring, systematization and dissemination of lessons learnt.										X	X	X	X	X	X	X	X	X	X	X	
Output 2.1.2. Norms for resource management practices developed and agreed among stakeholder	2.1.2.1. Technical studies of resource status and threats affecting GEVs.	Ministry of Climate Change			X	X	X	X	X	X	X	X	X	X	X	X	X					
	2.1.2.2. Participatory analyses of needs for norms and effectiveness of existing provisions.						X	X	X	X	X	X	X									
	2.1.2.3. Participatory formulation, dissemination								X	X	X	X	X	X	X	X	X	X	X			

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
groups covering target localities	and validation of the norms.																					
	2.1.2.4. Ongoing monitoring, oversight and advisory support..									X	X	X	X	X	X	X	X	X	X			
Output 2.1.3. Integrated landscape/seascape management plans developed and implemented by local landowners over 100,000ha	2.1.3.1: Participatory analyses of spatial dimensions of environmental threats and processes, and discussion of proposals to formulate plans.	Ministry of Climate Change					X	X	X	X	X	X	X	X								
	2.1.3.2: Technical studies of the spatial dimensions of environmental threats and processes.						X	X	X	X	X	X	X	X								
	2.1.3.3: Facilitation of multi-stakeholder negotiated formulation of spatial plans.								X	X	X	X	X	X	X	X	X	X	X	X		
Outcome 2.2: Farmers, ranchers and fishers are managing resources sustainably, resulting in improved flows of ecosystem goods and services, as a result of increased capacities and awareness																						
Output 2.2.1. Extension modules for sustainable production models incorporating R2R concepts	2.2.1.1: Review of extension needs	Ministry of Climate Change			X	X	X	X														
	2.2.1.2: Participatory review of content and effectiveness of current extension services.					X	X	X	X													
	2.2.1.3: Support to formulation of extension modules.								X	X	X	X	X	X								
	2.2.1.4: Support to the production of extension materials.								X	X	X	X	X	X								
	2.2.1.5: Support to the validation of extension modules and materials.										X	X	X	X	X	X	X	X	X	X		
Output 2.2.2. Field schools and mechanisms for participatory learning and experimentation in target localities	2.2.2.1: Community-level discussion of FFS.	Ministry of Climate Change				X	X	X	X													
	2.2.2.2: Support to participatory planning of each FFS.						X	X	X	X												
	2.2.2.3: Facilitation support to FFS, including provision of materials.								X	X	X	X	X	X	X	X	X	X	X	X		
	2.2.2.4: Support to systematization and sharing of FFS experiences.									X	X	X	X	X	X	X	X	X	X	X	X	X
Output 2.2.3. Pilot solar driers for copra	2.2.3.1: Community-level definition of needs and opportunities for support.	Ministry of Climate					X	X	X	X												

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
and other agricultural products	2.2.3.2: Support to installation of facilities.	Change							X	X	X	X										
	2.2.3.3: Training on use of facilities							X	X	X	X	X	X									
	2.2.3.4: Follow-up support, including dissemination of lessons and advice on financing options for upscaling									X	X	X	X	X	X	X	X	X	X	X	X	
Outcome 2.3 Capacities for generation of ecosystem goods and services are permanently restored in priority areas affected by land degradation																						
Output 2.3.1. Ecosystem restoration programmes implemented in all target localities	2.3.1.1: Participatory discussion and planning of restoration activities	Ministry of Climate Change					X	X														
	2.3.1.2: Provision of financial and technical support to restoration activities							X	X	X	X	X	X	X	X	X	X	X	X			
	2.3.1.3: Monitoring and systematization of experiences with restoration.									X	X	X	X	X	X	X	X	X	X	X	X	
	2.3.1.4: Dissemination of experiences and technical advice on restoration to potential sources of ongoing financial support.											X	X	X	X	X	X	X	X	X	X	
Outcome 2.4 Local people in target localities have opportunities and capacities to perceive direct benefits from conservation and sustainable land management																						
Output 2.4.1. Ecotourism development plans formulated with local participation in each target locality, including carrying capacity studies	2.4.1.1: Participatory definition of objectives and principles for ecotourism development.	Ministry of Climate Change			X	X	X	X														
	2.4.1.2: Social and environmental baseline and carrying capacity studies				X	X	X	X														
	2.4.1.3: Participatory formulation of locality-wide plans for ecotourism development						X	X	X	X												
	2.4.1.4: Community-level capacity development for ecotourism.							X	X	X	X	X	X	X	X	X	X	X				
	2.4.1.5: Participatory monitoring and systematization of ecotourism development								X	X	X	X	X	X	X	X	X	X	X	X		
Output 2.4.2. Ecotourism initiatives managed by local communities or with provision for generating significant	2.4.2.1: Site-specific participatory planning of ecotourism initiatives.	Ministry of Climate Change					X	X	X	X												
	2.4.2.2: Training and advisory support to individual ecotourism initiatives.																					
	2.4.2.3: Infrastructural investments for ecotourism development.								X	X	X	X	X	X	X	X						

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
benefits for local communities, including provisions for environmental sustainability	2.4.2.4: Environmental management and monitoring								X	X	X	X	X	X	X	X	X	X	X	X	X	
Output 2.4.3. Community-based businesses generating sustainable income from forest products as a motivation for conservation	2.4.3.1: Participatory analyses of options for generating income from sustainable management of forest products	Ministry of Climate Change					X	X	X	X												
	2.4.3.2: Technical studies of ecology to determine permissible offtake levels and management options						X	X	X	X												
	2.4.3.3: Facilitation of preparation of resource management and business development plans							X	X	X	X											
	2.4.3.4: Capacity development including training on resource management and monitoring, post-harvest care, processing, marketing and business management								X	X	X	X	X	X	X	X	X	X	X	X		
	2.4.3.5: Ongoing advisory and oversight support, including systematization and dissemination of lessons learned								X	X	X	X	X	X	X	X	X	X	X	X	X	X
Outcome 2.5 Strengthened protected area network in target localities, filling ecosystem coverage gaps and responding to overall R2R management plans																						
Output 2.5.1. Provincial and local PA prioritisation plans	2.5.1.1: Review and analysis of technical bases for PA prioritization.	Ministry of Climate Change			X	X	X	X														
	2.5.1.2: Facilitation of participatory reviews at province and island levels of priorities for PA establishment						X	X	X	X												
Output 2.5.2. MPA and CCA agreements negotiated and signed by government and local communities, with corresponding mapping and demarcation	2.5.2.1: Participatory multi-stakeholder discussion of PA proposals	Ministry of Climate Change					X	X	X	X	X	X	X	X								
	2.5.2.2: Facilitation of drafting of CCA/MPA agreements										X	X	X	X	X	X	X	X				

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5					
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Output 2.5.3. Buffer zones and corridors established between and around CCAs and MPAs	2.5.3.1: Participatory multi-stakeholder definitions of buffer zones and corridors						X	X	X	X	X	X	X	X										
Output 2.5.4. International designations of PAs	2.5.4.1: Compilation of existing technical information	Ministry of Climate Change		X	X	X	X																	
	2.5.4.2: Consultations with local communities leading to their formal endorsement of the applications					X	X	X																
	2.5.4.3: Drafting and submission of applications						X	X	X	X														
Output 2.5.5. Management plans for each PA, harmonized with provisions of overall landscape management plans	2.5.5.1: Technical studies to inform PA design and management	Ministry of Climate Change			X	X	X	X																
	2.5.5.2: Participatory definition of PA design, management prescription and regulations						X	X	X	X	X	X												
	2.5.5.3: Drafting and participatory validation of maps, management plans and regulations								X	X	X	X	X	X	X	X								
Output 2.5.6. Local PA management committees, functioning with capacities for adaptive management	2.5.6.1: Capacity development for PA management	Ministry of Climate Change					X	X	X	X	X	X	X	X	X	X	X	X						
	2.5.6.2: Investment in physical infrastructure and equipment						X	X	X	X														
	2.5.6.3: Ongoing advisory and advisory support						X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Outcome 2.6 Sustainable resource management and PA management supported by sustainable financing																								
Output 2.6.1: PA-specific financial management and investment plans	2.6.1.1: Analysis of financial requirements for PA management	Ministry of Climate Change			X	X	X	X	X															
	2.6.1.2: Awareness raising and training on financial contributions by local businesses, resulting in negotiation of commitments						X	X	X	X	X	X												
	2.6.1.3: Support to formulation of financial sustainability plans for each PA								X	X	X	X	X	X										
Output 2.6.2: Local-	2.6.2.1: Awareness raising of community members	Ministry of					X	X	X	X														

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4				Year 5				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
level financial mechanisms in support of PA management and landscape restoration	on PES schemes and identification of opportunities	Climate Change																					
	2.6.2.2: Negotiation with participating communities on the functioning of the PES schemes						X	X	X	X													
	2.6.2.3: Capacity development of participating communities on financial mechanisms						X	X	X	X	X	X	X	X									
	2.6.2.4: Marketing and negotiations with international PES partners								X	X	X	X	X	X	X	X							
	2.6.2.5: Ongoing advisory and oversight support								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Component 3: Knowledge management																							
Outcome 3.1 Best practices and lessons learned are systematized and disseminated																							
Output 3.1.1. Systematisation and dissemination documents	3.1.1.1: Formulation of protocols and mechanisms for systematization and dissemination	Ministry of Climate Change	X	X	X	X																	
	3.1.1.2: Training of project staff and partners on systematization		X	X	X	X																	
	3.1.1.3: Generation and dissemination of documents on best practices and lessons learned						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Outcome 3.2 Decision-making and planning are guided by information on trends in ecosystem conditions																							
Output 3.2.1. Systems in provincial government offices for management of information on ecosystem conditions and trends, feeding data to local organisations in target localities	3.2.1.1: Design and establishment of information management systems	Ministry of Climate Change	X	X	X	X																	
	3.2.1.2: Capacity development in provincial government offices and local organizations for maintenance and use of information management systems				X	X	X	X	X	X													
Outcome 3.3 Project management is subject to effective M&E that feeds back into adaptive management decisions.																							
Output 3.3.1. Project monitoring and evaluation system	3.3.1.1: Design and implementation of project M&E system	Ministry of Climate Change	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

ANNEX 4: RISK MATRIX

Risk No.	Risk statement	Impact (effect on project organization if risk were to occur: H, MH, ML, or L)	Likelihood (estimate of likelihood: H, MH, ML, or L)	Overall ranking (Red/ Amber/ Green)	Mitigating action	Action owner
1	Climate change may exceed the coping ranges of the proposed resource management strategies.	H (would undermine the sustainability and effective of the resource management strategies and undermine ecosystem sustainability)	ML (adaptation focus will be incorporated into plans and technologies supported by the project)	Amber	The project will focus especially on developing capacities for the formulation of natural resource management strategies among stakeholders at all levels, through the participatory approaches to technology generation and transfer proposed under Component 2, and the capacities for knowledge management and response to be promoted under Component 3. This will maximize the ability of the stakeholders to adapt to currently unforeseen future climatic extremes, rather than adhering to predetermined and rigid solutions designed for a limited range of conditions.	Ministry of Climate Change
2	Leakage of project threats resulting from site-specific actions (for example unsustainable intensification of agriculture, increased logging in non-project areas) issues	MH (would not affect on-site benefits, but these would be offset by off-site impacts)	ML (can largely be avoided through support to governance)	Amber	There is a certain degree of unavoidable risk of leakage given that the target localities will not cover the entirety of the islands in question. The net outcomes in terms of environmental impacts will, however be less than in the without-project scenario, given that the project's actions will not be limited to the target localities themselves. They will also include the strengthening of institutional capacities at national and provincial levels for land use planning, environmental assessment and PA prioritisation, which will be applied beyond the project areas themselves; in addition, the policy work foreseen under Outcome 1.1 will have nationwide benefits in terms of the avoidance of the potential impacts of sector development. It is furthermore expected that the innovative models of	Ministry of Climate Change

Risk No.	Risk statement	Impact (effect on project organization if risk were to occur: H, MH, ML, or L)	Likelihood (estimate of likelihood: H, MH, ML, or L)	Overall ranking (Red/ Amber/ Green)	Mitigating action	Action owner
					multi-stakeholder planning and governance promoted in the target localities will be replicated elsewhere on the target islands and beyond, thereby progressively reducing the extent of the areas in which leakage might occur. The involvement in the processes of the councils of chiefs of each of the target islands will have significant implications in terms of island-wide replication of the model.	
3	Resistance among key actors to taking or modifying actions in support of environmental sustainability	H (project effectiveness and sustainability are strongly dependent on local buy-in)	L (actors have expressed strong commitment)	Green (high confidence in stakeholder commitment)	Many policy documents already contain strong commitments to environmental sustainability, but there is still a risk of some individual sector policies (e.g. livestock and tourism) being pursued at the expense of environmental considerations. The project's actions in relation to policy influence will recognize the valid motivations of the Government in stimulating the target sectors, as motors of national economic growth: rather than proposing to control their expansion per se, it will therefore focus on promoting the incorporation of considerations of environmental sustainability into sector growth. This will, in the medium and long terms, be positive for the sectors themselves, as it will ensure that they do not undermine the resource base on which they themselves depend, and at the same time will help to increase their resilience to climatic shocks; it will also help to ensure that the growth of individual sectors does not occur at the expense of the general good, undermining the sustainability of development as a whole; at the same time, this focus on sustainability will help to optimize the outcomes of these sectors in terms of their impacts on	Ministry of Climate Change

Risk No.	Risk statement	Impact (effect on project organization if risk were to occur: H, MH, ML, or L)	Likelihood (estimate of likelihood: H, MH, ML, or L)	Overall ranking (Red/ Amber/ Green)	Mitigating action	Action owner
					biodiversity and other global environmental values.	
4	Resistance among local communities to collaborating in landscape planning, PA management, sustainable resource management and restoration.	H (project effectiveness and sustainability are strongly dependent on local buy-in)	L (actors have expressed strong commitment)	Green (high confidence in stakeholder commitment)	The project will adopt a highly participatory and culturally-sensitive approach to raising awareness among community members of the social implications of resource management decisions, in order to maximize their motivation for collaboration in their own interests. Furthermore, the processes of inter-community analysis and negotiated planning will be subject to prior consultation and consent by the national and island-specific councils of chiefs, in order to ensure their credibility among local community members.	Ministry of Climate Change
5	Variations in availability of funding for PA management and environmental management	ML (Vanuatu's community-managed PAs can function in "stand-by" mode in the event of funding shortfalls)	ML (the cruise tourism industry shows excellent prospects for growth and is only likely to be interrupted sporadically by extreme events such as cyclones)	Amber	The financing strategy is dependent on stability or growth in the levels of tourism activity, which is intended to be one of the main sources of income at local and national levels. Projections for tourism growth are, however, very positive. In order to protect against the risks of short-term downturns in income (for example following hurricanes), it is proposed that the resulting fund will be managed cautiously, building up a sufficient reserve to allow it to weather such periods. Furthermore, the nature of Vanuatu's small community-managed PAs means that such possible funding shortfalls would have limited implications for their management and exposure to threats in the short term, although over a longer term they would limit opportunities to implement proposed investments in infrastructure and management/planning mechanisms.	Ministry of Climate Change

ANNEX 5: DRAFT TERMS OF REFERENCE

Co-financed National Staff

1. National Project Director (NPD)

Job Title:	National Project Director (NPD)
Duration:	Full duration of Project (5 years)
Duty Station:	Port Vila, Vanuatu
Reports to:	Project Steering Committee
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>Under the overall guidance of the Project Steering Committee and the FAO Subregional Coordinator (SRC) for the Pacific, and working closely with the LTO, NPC, FAO-GEF Coordination Unit (TCID), FAO officers at the Headquarters, Regional and Sub-regional offices and relevant ministries, the National Project Director will perform the following tasks:</p> <ul style="list-style-type: none">Assume overall responsibility for the successful execution and implementation of the project, accountability to the Government and FAO for the proper and effective use of project resources;Serve as a focal point for the coordination of projects with other Government agencies, FAO and outside implementing agencies;Ensure that all Government inputs committed to the project are made available;Supervise the work of the National Project Manager and ensure that the National Project Manager is empowered to effectively manage the project and other project staff to perform their duties effectively;Select and arrange, in close collaboration with FAO, for the appointment of the National Project Manager and project staff, and consultants;Supervise the preparation of project work plans, updating, clearance and approval, in consultation with FAO and other stakeholders;Represent the Government institution (national counterpart) at the tripartite review project meetings, and other stakeholders meeting;	
Key performance indicators	
Expected Outputs (per mission if applicable):	Required Completion Date:
<ul style="list-style-type: none">Detailed work plan endorsed and implementedProject implementation completedProject Terminal report submitted	End of Project

GEF-funded International Consultants

1. Chief Technical Adviser (CTA)

Job Title:	International Chief Technical Adviser (CTA)	
Minimum number of years of relevant experience required:	At least 10 years of professional; experience in relevant areas	
Expected Start of Assignment:	Project month 1	
Duration:	Full time for the first 30 months and then 6 months spread over the remaining 30 calendar months of the project	

Duty Station:	Port Vila, Vanuatu
Reports to:	FAO Subregional Coordinator for the Pacific Islands
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>Under the overall guidance of the FAO Subregional Coordinator (SRC) for the Pacific, and working closely with the LTO, NPC, FAO-GEF Coordination Unit (TCID), FAO officers at Headquarters, the Regional and Sub-regional offices and relevant ministries, the Chief Technical Adviser will support the National Project Coordinator and National Project Director in ensuring the technical and administrative quality of the implementation of the project, in compliance with the requirements of the Government of Vanuatu, FAO and GEF. He/she will perform the following tasks:</p> <ul style="list-style-type: none"> • Prepare detailed draft work programmes to be reviewed and approved by the PSC; • Advise on the establishment and implementation of the project M&E system • Prepare in close collaboration with the NPM and lead agencies for each component, progress and financial reports as specified in the Project Document; • Ensure adherence to the Implementing Agencies' administrative, financial and technical reporting requirements; • Ensure that financial allocations and expenditures are in accordance with UN financial rules and regulations; • Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by FAO, GEF, DoF and other oversight agencies; • Clear for approval administrative and financial reports; • Provide guidance and supervision to the work of the staff of the PMU including with regard to the implementation of all activities specified in the Project Document, and ensure their timely completion; • in consultation with NPC and LTO, establish Terms of Reference for Letters of agreement, sub-contractors and consultants; • monitor the work of the consultants and sub-contractors, based on their Terms of Reference, and evaluate the quality of the outputs; • provide technical inputs into project planning and implementation processes; • following the guidance of the PSC, liaise with Lead Agencies regarding the implementation of components and activities and with donors involved in the project; • facilitate the implementation of the project and promote exchanges of information among project participants; • ensure, as far as practical, full participation of partners and stakeholders in the project, and prepare a strategy for strengthening partner and stakeholder participation; facilitate finalization and distribution of the project outputs and other documents; • seek as required direction, and strategic guidance from the PSC regarding project implementation and execution of agreed activities over the entire period of the project; • seek as required direction, and strategic guidance from the PSC regarding the establishment of timelines and milestones for provision of agreed outputs; • prepare as required working documents to be submitted to meetings of the PSC and to FAO; • review all documents prepared by third parties for submission to the PSC and FAO to ensure they meet the appropriate technical, scientific and English standards; • prepare the draft agenda and draft annotated agenda for the PSC meetings in accordance with the rules of procedure of those bodies; • liaise with other relevant GEF and non-GEF projects with focus on those referred to in the Project Document; • provide general leadership in terms of coordination of activities with other programmes and projects at global, regional and where feasible national, levels; • oversee the allocation of funds in accordance with the directions of the Project Steering Committee; • prepare in close consultations with all partners and executing agencies the annual PIR reports for transmission to the GEF; and • assist the Evaluation and Oversight Unit as required in arrangements for the terminal evaluation. 	

Key competencies/qualifications	
<ul style="list-style-type: none"> advanced degree from University or equivalent Institution in environmental management, environmental sciences, agriculture/horticulture science or related fields; a minimum of ten years of working experience, five of which should be in the management or coordination of international, regional or national projects related to the environment; computer literacy required; knowledge of the UN system and procedures preferred; efficiency, competence and integrity as well as negotiating skills, tact and diplomacy are essential; and fluency in spoken and written English is required. 	
Key performance indicators	
Expected Outputs (per mission if applicable):	Required Completion Date:
<ul style="list-style-type: none"> Detailed work plan and training program Completed training and progress report End of mission reports 	End of project

GEF-funded national consultants

1) National Project Coordinator

Job Title:	National Project Coordinator (NPC)
Minimum number of years of relevant experience required:	At least 10 years of professional; experience in relevant areas
Expected Start of Assignment:	Project month 1
Duration:	Full time
Duty Station:	Port Vila, Vanuatu
Reports to:	FAO Subregional Coordinator for the Pacific Islands
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>The National Project Coordinator (NPC) will be a nationally recruited expert selected based on an open competitive process. He/she will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision of project staff, consultants and sub-contractors. The NPC will report to the National Project Director in close consultation with the FAO CTA for all of the project's substantive and administrative issues. From the strategic point of view of the project, the NPC will report on a periodic basis to the Project Steering Committee (PSC). Generally, the NPC will be responsible for meeting government obligations under the project, under the project execution modality. He/She will perform a liaison role with the Government, FAO and other UN Agencies, NGOs and project partners, and maintain close collaboration with other donor agencies providing co-financing. He/she will perform the following tasks:</p> <ul style="list-style-type: none"> Manage the PMU; Supervise and coordinate the production of project outputs, as per the project document; Mobilize all project inputs in accordance with FAO procedures for nationally executed projects; Supervise and coordinate the work of all project staff, consultants and sub-contractors; Coordinate the recruitment and selection of project personnel; Prepare and revise project work and financial plans, as required by the Government and FAO; Facilitate administrative backstopping to subcontractors and training activities supported by the Project; Disseminate project reports and respond to queries from concerned stakeholders; 	

<ul style="list-style-type: none"> • Report progress of project to the steering committee, and ensure the fulfilment of steering committee's directives. • Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally; • Ensures the timely and effective implementation of all components of the project; • Assist community groups, municipalities, NGOs, staff, students and others with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities 	
Key competencies/qualifications	
<ul style="list-style-type: none"> • A university degree in Natural Resources Management, Conservation or Protected Areas Management, related fields, Environmental Sciences, or related fields of expertise • At least 10 years of experience in natural resource management and/or co-management • At least 5 years of project/program management experience; • Ability to effectively coordinate a large, multi-stakeholder project; • Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project; • Strong drafting, presentation and reporting skills; • Strong computer skills, in particular mastery of all applications of the MS Office package and internet search; • Excellent command of English. 	
Key performance indicators	
Expected Outputs (per mission if applicable):	Required Completion Date:
<ul style="list-style-type: none"> • Detailed work plan and training program • Completed training and progress report • End of mission reports 	End of project

2) Natural resource governance, participation and livelihood specialist

Job Title:	Natural resource governance, participation and livelihood specialist
Minimum number of years of relevant experience required:	At least 5 years of professional; experience in relevant areas
Expected Start of Assignment:	Project month 1
Duration:	Full time
Duty Station:	Port Vila, Vanuatu
Reports to:	FAO Subregional Coordinator for the Pacific Islands
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>The Natural resource governance, participation and livelihood specialist will be a nationally recruited expert selected based on an open competitive process. He/she will be responsible for:</p> <ul style="list-style-type: none"> • Developing a participation plan that makes provision for mechanisms to ensure the effective participation of all relevant stakeholders in the delivery of project outputs; • Support, advice and where necessary facilitation of interactions with community members in target localities, including workshops to plan landscape management and define priorities for PA establishment; • Provision of oversight and methodological support to the development and strengthening of multi-stakeholder mechanisms for landscape management and governance, and the formulation of integrated landscape management plans, proposed under Outcome 2.1; 	

- Advice on the formulation and application of participatory approaches to supporting the development and transfer of sustainable resource management practices, including the incorporation of the sustainable livelihood approach, under Outcome 2.2;
- Advice on social and organizational aspects of project support to the development of strategies for enabling local people to perceive sustainable benefits from natural resources, under Outcome 2.4. and the development of financial mechanisms under Outcome 2.6.
- Advice on the formulation and measurement of project indicators related to natural resource governance, participation and livelihoods

Key competencies/qualifications

- A university degree related to natural resources management with emphasis on social and livelihood aspects
- At least 5 years of experience in social and livelihood aspects of natural resource management, including gender and participation.
- Ability to work as part of a multidisciplinary team and to collaborate effectively with project partners
- Strong drafting, presentation and reporting skills;
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;
- Excellent command of English.

3) Monitoring, evaluation, knowledge management and communication specialist

Job Title:	Monitoring, evaluation, knowledge management and communication specialist
Minimum number of years of relevant experience required:	At least 5 years of professional; experience in relevant areas
Expected Start of Assignment:	Project month 1
Duration:	Full time
Duty Station:	Port Vila, Vanuatu
Reports to:	FAO Subregional Coordinator for the Pacific Islands
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>The monitoring, evaluation, knowledge management and communication specialist will be a nationally recruited expert selected based on an open competitive process. He/she will be responsible for:</p> <ul style="list-style-type: none">• Developing a monitoring plan that makes methodological and operational provision for the measurement of each of the indicators specified in the project results framework, including the definition of pending baseline values and subsequent measurements throughout the life of the project;• Formulating and implementing mechanisms to allow the results of monitoring to be input in an effective and timely manner into project decision-making in accordance with the concept of adaptive management.• Ensuring that the results of monitoring are available and presented in a useful manner to external evaluators at project mid-term and end.• Formulating and implementing mechanisms for the systematisation of lessons learned by other relevant initiatives in the country and the region (including through the regional R2R programme) and for their incorporation into the formulation of the project’s strategies.• Formulating and implementing mechanisms for the systematisation of experiences generated through the project itself, including the development of capacities and protocols for systematisation by other PMU members, and their effective dissemination to national partners and to other projects in the regional R2R programme.• Formulating and implementing a communication strategy proposing principles and mechanisms for outreach and other forms of interaction with project stakeholders and partners at all levels.	

Key competencies/qualifications	
<ul style="list-style-type: none"> • A university degree related to natural resources management • At least 5 years of experience related to project management, monitoring, evaluation and communication • Ability to work as part of a multidisciplinary team and to collaborate effectively with project partners • Strong drafting, presentation and reporting skills; • Strong computer skills, in particular mastery of all applications of the MS Office package and internet search; • Excellent command of English. 	
Key performance indicators	
Expected Outputs (per mission if applicable):	Required Completion Date:
<ul style="list-style-type: none"> • Monitoring and evaluation plan • Indicators measured and reported accurately and on time • Systematisation strategy and corresponding systematisation outputs • Communication strategy and corresponding communication materials and mechanisms. 	End of project

4) Biodiversity and natural resource management specialist

Job Title:	Biodiversity and natural resource management specialist
Minimum number of years of relevant experience required:	At least 5 years of professional; experience in relevant areas
Expected Start of Assignment:	Project month 1
Duration:	Full time
Duty Station:	Port Vila, Vanuatu
Reports to:	FAO Subregional Coordinator for the Pacific Islands
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>The Biodiversity and natural resource management specialist will be a nationally recruited expert selected based on an open competitive process. He/she will be responsible for:</p> <ul style="list-style-type: none"> • Advising on and overseeing the implementation of project strategies with implications for the conservation of biodiversity and other global environmental values, including the design of PAs, the definition of PA management strategies and the formulation and promotion of practices for the management of productive landscapes (agriculture, livestock, forestry and fisheries) in such a way as to optimise their global environmental benefits • Liaising with partner institutions working on biodiversity conservation, research and natural resource management issues in order to ensure effective collaboration and interchange of information and research results • Advising on the development of terms of reference for thematic consultants and other specialists collaborating with the project in studies related to biodiversity and natural resource management, and participation in the studies as appropriate in order to maximise their relevance and their contribution to project management decisions and strategies for biodiversity conservation and resource management promoted by the project. • Advising on the definition of protocols for the measurement of project indicators related to biodiversity 	

conservation and sustainable natural resource management, ensuring their accurate and timely measurement, and advising on how to reflect the results of the measurements in project management decisions.

Key competencies/qualifications

- A university degree related to biology and natural resources management
- At least 5 years of experience related to biodiversity conservation and natural resource management
- Ability to work as part of a multidisciplinary team and to collaborate effectively with project partners
- Strong drafting, presentation and reporting skills;
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;
- Excellent command of English.

5) (GEF-funded, full time)

Job Title:	Operational support officer
Minimum number of years of relevant experience required:	5 years
Expected Start of Assignment:	Project month 1
Duration:	Full time (60 months)
Duty Station:	Port Vila, Vanuatu
Reports to:	FAO Subregional Coordinator for the Pacific Islands
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>Under the direct supervision of the NPC, the Operations and Administrative Officer will have the following responsibilities and functions:</p> <ul style="list-style-type: none"> • Ensure smooth and timely implementation of project activities in support of the results-based work plan, through operational and administrative procedures according to FAO rules and standards; • Coordinate the project operational arrangements through contractual agreements with key project partners; • Arrange the operations needed for signing and executing Letters of Agreement (LoA) with relevant project partners; • Maintain inter-departmental linkages with FAO units for donor liaison, Finance, Human Resources, and other units as required; • Day-to-day manage the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the NPC; • Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring; • Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required; • Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements; • Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required; • Undertake missions to monitor the outputs-based budget, and to resolve outstanding operational problems, as appropriate; • Be responsible for results achieved within her/his area of work and ensure issues affecting project delivery and success are brought to the attention of higher level authorities through the BH in a timely manner; 	

- In consultation with FAO Evaluation Office, the LTU, and FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations, and provide inputs regarding project budgetary matters;
- Provide inputs and maintain the FPMIS systems up-to-date; and
- Undertake any other duties as required.

Key competencies/qualifications

- University Degree in Economics, Business Administration, or related fields;
- Three years of experience in project operation and management related to natural resources management, including field experience in developing countries;
- Proven capacity to work and establish working relationships with government and non-government representatives;
- Excellent communication skills in English at professional level (in reading, writing and communicating).
- Knowledge of FAO's project management systems is an advantage.

6) Finance & Procurement Associate (Budget holder support)

Job Title:	Finance & Procurement Associate (Budget holder support)
Minimum number of years of relevant experience required:	5 years
Duration:	60 months
Duty Station:	FAO Country Office, Port Vila, Vanuatu
Reports to:	Sub-regional Coordinator, FAOSAP
Description of task(s) and objectives to be achieved (per mission if applicable)	
<p>Under the overall guidance of the FAO Subregional Coordinator (SRC) for the Pacific, and working closely with the LTO, NPC, FAO-GEF Coordination Unit (TCID), FAO officers at Headquarters, the Regional and Sub-regional office and relevant ministries, the Finance & Procurement Associate will perform the following tasks:</p> <ul style="list-style-type: none"> • Overseeing the smooth channelling of GEF funds to the project in accordance with the rules and requirements of the Government of Vanuatu, FAO and GEF • In consultation with the CTA and NPC, prepare terms of reference for thematic short-term consultants and institutional sub-contracts to support project-related activities, organize their selection processes and oversee their selection and appointment, in accordance with the rules and requirements of the Government of Vanuatu and FAO • Organize logistical aspects of project monitoring visits by FAO staff from HQ, the regional office in Apia and the national office in Port Vila • Provide logistical support to external project evaluations at project mid-term and end. 	
Key competencies/qualifications	
<ul style="list-style-type: none"> • University Degree in Economics, Business Administration, or related fields. • Five years of experience in project finance and procurement. • Knowledge of FAO's project management systems. 	

FAO Technical Support Services (TSS):

Lead Technical Officer (FAO LTO)

Responsibilities:

- In consultation with the Government, appoint project personnel and consultants as per the timeline

- Oversee the implementation of project in coordination with FAO Representation and government departments, donor agency and development partners;
- Visit selected field sites with team to monitor and review project implementation and identify constraints and make recommendations;
- Provide technical guidance in identification and prioritization of short-term and medium-term interventions for reducing vulnerabilities and increasing livelihoods options
- Oversee and formulate the outline of programme and assess the work requirements of different components and allocate work assignments among the team members;
- Participate in the project workshops and committee meetings to provide necessary support in timely submission of reports;
- Technically guide the development of methodologies for national consultant and validate them for adoption for field data collection;
- Carry out a skill assessment of extension systems and services provided to communities and suggest improvements and capacity building activities;
- Guide the field team in the preparation of technical specifications for all inputs required.

External Evaluation Team - 6 Weeks

Under the ultimate responsibility of FAO Office of Evaluation, in accordance with FAO evaluation procedures and taking into consideration evolving guidance from the GEF Evaluation Office and in close consultation with the Lead Technical Officer, Chief Technical Advisor, the FAO budget holder (SAP), the FAO Lead Technical Unit, the external evaluation team will conduct a mid-term evaluation during the third year of the project and three months prior to the terminal review meeting of the project partners conduct an independent final evaluation. The mid-term evaluation will review the progress of the project implementation in fulfilling the project objectives as per the time line and suggest any course correction required in order to realize the outcomes of the project. The final evaluation will review project impact, analyse sustainability of results and whether the project has achieved its objectives and benchmarks. The evaluation will furthermore provide recommendations for follow-up actions.

The evaluation will, inter alia:

- review the effectiveness, efficiency and timeliness of project implementation;
- analyse effectiveness of implementation and partnership arrangements;
- identify issues requiring decisions and remedial actions to insure sustainability of project outcomes and outputs;
- identify lessons learned about project design, implementation and management;
- highlight technical achievements and lessons learned; and
- Prepare a final evaluation report.

Requirements: The team should include professionals specialized in SLM, SFM, biodiversity and PA management and with demonstrated experience in project evaluation. They must have 10 years of professional experience in the field. Previous working experience in the region, as well as experience in project coordination with international bodies, will be especially valuable.

Languages: English

Location: Vanuatu with visits to project sites

Duration: 2 consultants (international and national) for 6 weeks each

PROJECT STEERING COMMITTEE

Role of the Project Steering Committee (PSC)

The PSC will be the policy setting body for the project. As and when required, the PSC will be the ultimate decision-making body with regard to policy and other issues that may affect the achievement of project objectives. The PSC will be responsible for providing general oversight of project execution, and will ensure that all activities in the GEF project document are adequately prepared and carried out. In particular, the PSC will:

- Take decisions in the course of the practical organization, coordination and implementation of the project, and provide overall guidance to the Local Programme Steering Committee (LPSC);
- Advise the LPSC on other ongoing and planned activities facilitating collaboration between the Project and other programmes, projects and initiatives;
- Facilitate that co-financing support is provided in a timely and effective manner;
- Review six-monthly Project Progress Reports (PPRs), and provide overall oversight of project progress and achievement of planned results as presented in the PPRs;
- Ensure all project outputs are in accordance with the GEF project document;
- Review, amend if appropriate, and approve the draft Work Plan and Budget for submission to FAO;
- Provide inputs to the mid-term and final evaluations, review findings, and provide comments for the Management Response;
- Ensure the dissemination of project information, lessons learnt, and best practices.
- Facilitate cooperation between institutions of central Government, Provincial governments, FAO, and project participating partners at the local level;

Meetings of the PSC

- The PSC meetings will be normally be held bi-annually. Nevertheless, the PSC Chairperson will have the discretion to call additional meetings, if this is considered necessary. PSC meetings would not necessarily require a physical presence, and could be also undertaken electronically. No more than 7 months may elapse between PSC meetings;
- Invitations to a regular PSC meeting shall be issued not less than 90 days in advance of the date fixed for the meeting. Invitations to special meetings shall be issued not less than 40 days in advance of the meeting date.

Agenda

- A provisional agenda will be drawn up by the Project Coordinator and sent to PSC members following the approval of the Chairperson. The provisional agenda will be sent not less than 30 days before the meeting date;
- A revised agenda including comments received from PSC members will be circulated 5 working days before the meeting date;

The agenda of each regular meeting shall include:

- A report of the National Project Coordinator on project activities during the inter-sessional period;
- A report and recommendations from the NPC on the proposed Work Plan and Budget and the proposed budget for the ensuing period;

- Reports that need PSC intervention;
- Consideration of time and place of the next meeting;
- Any other matters as approved by the Chairperson.
- The agenda of a special meeting shall consist only of items related to the purpose for which the meeting was called.

The PSC Secretariat

The PMCU will act as Secretariat to the PSC, and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft Work Plan and Budget, and independent scientific reviews of significant technical proposals or analyses. The NPC will prepare written report of all PSC meetings and be responsible for logistical arrangements regarding the holding of those meetings.

Election of Chairperson and Vice-Chairperson

The PSC will be chaired by the PS, MLNR (or his representative). A Vice-Chairperson for PY1 will be nominated by PSC members at their first PSC meeting. The Vice-Chairperson will serve up to the PSC meeting in PY2, finishing her/his term upon the completion of the PSC meeting held closest to one year after selection. At this point, a successor Vice-Chairperson shall be chosen by the PSC members in similar manner.

Functions of Chairperson and Vice-Chairperson

The Chairperson shall exercise the functions conferred on him/her in these TORs, and in particular shall:

- Declare the opening and closing of each PSC meeting;
- Lead the PSC meeting discussions, ensuring the observance of these TORs, accord the right to speak, enounce questions, and announce decisions;
- Rule on point of order;
- Subject to these TORs, manage the proceedings of the meetings;
- Ensure circulation of all relevant documents to PSC members through the PSC Secretariat;
- Sign approved Work Plan and Budget and any subsequent proposed amendments submitted to FAO;
- In liaison with the PSC Secretariat, the Chairperson shall be responsible for determining the date, site, and agenda of the PSC meeting(s), and chairing these meetings;
- The Vice-Chairperson shall exercise the functions of the Chairperson in the Chairperson's absence or at the Chairperson's request.

Participation

The PSC will include the Heads of Departments representing MLNR, MAQFF, MTTCl and Provincial Governments. The Project Coordinator and an official from the FAO GEF Coordination Unit shall be represented on the PSC, in ex-officio capacity. The Project Coordinator will also be the Secretary to the PSC.

Decision-making

All decisions of the PSC shall be taken by consensus.

Reports and recommendations

- At each meeting, the PSC shall approve a report text that embodies its views and decisions, including, when requested, a statement of minority views;

- A draft report shall be circulated to the PSC Members after the meeting for comments. Comments shall be accepted over a period of 20 days. Following its approval by the Chairperson, the final report will be distributed among PSC members and shall be uploaded to the MLNR website.

Official language

The official language of the PSC will be English.

ANNEX: QUANTIFYING CARBON BENEFITS

Three forest management regimes are considered to generate carbon benefits through the project. The narrative of these regimes and intervention scenarios is as follows:

- 1) **Forest protection:** this mitigation activity will be carried out for 62,434 ha of healthy, largely intact forests, spread over 4 target islands, which is of importance for biodiversity conservation, watershed protection, cultural value and local livelihood support. These forests are currently used by local people for the small-scale extraction of round timber for building and non-timber forest products such as roofing thatch and game. In some areas the forest resources are threatened by the extraction of increasing quantities of wood products due to population growth and increasing demand for handicrafts for sale to tourists. The forests are also threatened by clearance for agriculture, including subsistence food crops under cyclical fallow systems in response to demographic growth, with some longer term cash crops such as *kava* in response to growing markets; and clearance for pasture by, on the one, economically powerful actors motivated in part by territorial control, and on the other, smallholders responding to the Government's policy to expand the smallholder livestock sector nationwide. Under the without-project scenario it is estimated that 5,888 ha will be deforested for annual crop production and pasture establishment over the 5 year project period, equivalent to 9.43% of the existing forest cover, or an annual rate of 1.89%. As a result of improved governance and intensification, the project expects to reduce deforestation over the period to 3,514 ha (annual deforestation rate from 1.89% to 1.13%), or 60% of the without-project level (2,374 ha of avoided deforestation area).
- 2) **Restoration/regeneration:** carbon stocks will be enhanced by means of regeneration of degraded areas with pioneer grass, shrub and tree species, with an emphasis of native species. This mitigation activity will be considered for project areas, where tree cover is now very low or non-existent due to historical land degradation and overexploitation. These areas have carbon stocks in carbon pools at their lowest level. Therefore in these areas, the aim is to increase carbon stock through natural regeneration. The project will provide direct support to the enhancement of carbon stocks through regeneration on a total of 800 ha spread over the 4 target islands; these relatively small areas will serve as pilots which are expected to result in scaling up with financial support from PES schemes and corporate social responsibility funds from the tourism sector, leading to an eventual restoration of other area.
- 3) **Agroforestry and agro-sylvo pasture systems (sustainable forest management):** agriculture mostly consists of traditional cyclical fallow systems based on subsistence food cropping followed by natural colonisation of native pioneer tree and shrub species. Pastures have variable levels of tree cover including over-mature coconuts. The project will provide extension support to farmers and ranchers leading to increases in the content of woody perennials in agriculture and pasture areas, with the aim of increasing sustainability and productivity (contributing to the reduction of pressures on neighbouring forests), biodiversity/connectivity value and carbon storage. It is expected that as a result tree numbers will be increased across 6,625 ha of agricultural and 600 ha of pasture area (7,225 ha).. The occurrence of fire is not considered in the GHG emissions calculation. In addition, the project will promote solar driers for agricultural crops in order to reduce annual firewood consumption.

The carbon benefits from the project are estimated in terms of lifetime direct as well as indirect GHG emission avoided over the default time horizon of 20 years under the IPCC guideline and the guidance of the GEF Tracking Tool for LULUCF. For this project, the durations of implementation phase and the capitalization phase are defined as 5 years and 15 years, respectively. The carbon benefits are calculated using EX-Ante Carbon balance Tool (EX-ACT).

Direct lifetime GHG emission avoided

In the GEF Tracking Tool for Climate Change Mitigation projects, direct lifetime GHG emissions avoided are the emissions reductions attributable to the investments made during the project's supervised implementation period, totalled over the respective lifetime of the investments. The following variables and assumptions are used for the calculation. The EX-ACT results file is available:

Variable	Value	Unit	Note
Lifetime length for direct GHG emission avoided	20	years	5-year implementation phase plus 15-year capitalization phase
Climate, and Moisture regime	Tropical Moist	-	EX-ACT data
Dominant Regional Soil Type	High activity clay Soils	-	EX-ACT data
Total area of target landscapes	81,000	ha	Project target
Area for GHG emissions calculation in EXACT	70,459	ha	Current area of natural forest (62,434ha), plus the areas of annual cropping, grazing and degraded land targeted for restoration through agroforestry (6,625ha) and agrosylvopastoral (600ha) systems and reforestation (800ha), within the total area of target landscapes (81,000 ha).
Target benefit area via forest protection	62,434	ha	Current area of natural forest in the target landscapes
Forest cover loss during 5 years without project (baseline)	5,888	ha	Project estimation based on the field survey at an annual deforestation rate of 1.89%. Deforestation for annual crop production based on historic rates of cattle herd expansion and deforestation for agriculture based on historic rates of population growth per province.
Forest cover loss during 5 years with project through forest protection activity (project target)	3,514	ha	Project target estimation: the project will reduce deforestation over 5 years to 60% of the without-project level.
Area of avoided deforestation	2,374	ha	
Target benefit area via assisted forest plantation in degraded land	800	ha	Project target
Target benefit area of existing agriculture and pasture to be restored through agroforestry and agrosylvopastoral systems	7,225	ha	Project target through improved agroforestry systems (6,625 ha) and agrosylvopasture system (600 ha)
Tier 2 values for above- and below-ground carbon stock (stem, branches, leaves, roots) and soil carbon in natural forests	120	tC/ha	Adapted Tier 2 default values for Zone 4 (Tropical shrub land)
Baseline annual firewood consumption	19,156	Ton dry matter/year	Assumed the data as dry matter.
Target annual firewood consumption with project	16,518	Ton dry matter/year	Project target. Assumed the data as dry matter. Reduction of 7,914 ton over 5 years.

The estimated values of direct lifetime GHG emission avoided during 20 years (5 years of implementation phase and 15 years of capitalization phase) are as follows:

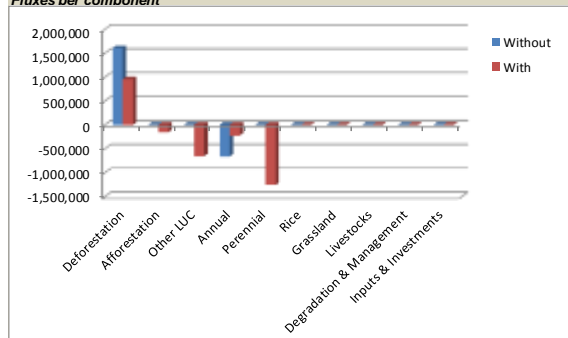
Management regime	Area (ha)	Direct lifetime GHG emission avoided (tCO ₂ eq)
Forest Protection	62,434	647,410
Restoration/regeneration	800	153,329
Agroforestry and agro-sylvo pasture systems (sustainable forest management)	7,225	1,470,492
TOTAL	70,459	2,271,231

The direct lifetime GHG emission mitigation potential from the project is estimated as 2,271,231 tCO₂eq, which is equivalent to about 1.6 tCO₂eq per hectare per year in the considered biome and time frame.

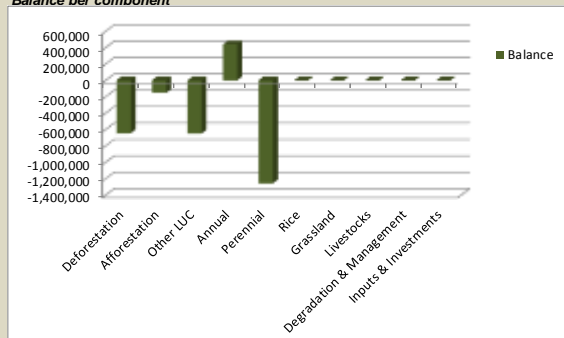
Table below provides the details of the direct lifetime GHG fluxes as calculated with the EX-ACT during 20 years of project lifetime:

Project Name	Integrated Sustainable Land		Climate	Tropical (Moist)		Duration of the Project (Years)			20		
Continent	Oceania	Dominant Regional Soil Type		HAC Soils		Total area (ha)			70459		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO ₂			N ₂ O	CH ₄	Without	With	Balance
	All GHG in tCO ₂ eq Positive = source / negative = sink			Biomass	Soil	Other					
Land use changes											
Deforestation	1,605,707	958,297	-647,410	-389,969	-257,441		0	0	80,285	47,915	-32,370
Afforestation	0	-153,329	-153,329	-41,551	-111,778		0	0	0	-7,666	-7,666
Other LUC	0	-649,199	-649,199	69,227	-718,426		0	0	0	-32,460	-32,460
Agriculture											
Annual	-657,157	-217,780	439,376	0	439,376		0	0	-32,858	-10,889	21,969
Perennial	0	-1,259,438	-1,259,438	-1,170,932	-88,506		0	0	0	-62,972	-62,972
Rice	0	0	0	0	0		0	0	0	0	0
Grassland & Livestocks											
Grassland	0	-715	-715	0	-715		0	0	0	-36	-36
Livestocks	0	0	0	0	0		0	0	0	0	0
Degradation & Management	0	0	0	0	0		0	0	0	0	0
Inputs & Investments	4,291	3,774	-517			-517	0		215	189	-26
Total	952,841	-1,318,390	-2,271,231	-1,533,224	-737,490	-517	0	0	47,642	-65,920	-113,562
Per hectare	14	-19	-32	-21.8	-10.5	0.0	0.0	0.0			
Per hectare per year	0.7	-0.9	-1.6	-1.1	-0.5	0.0	0.0	0.0	0.7	-0.9	-1.6

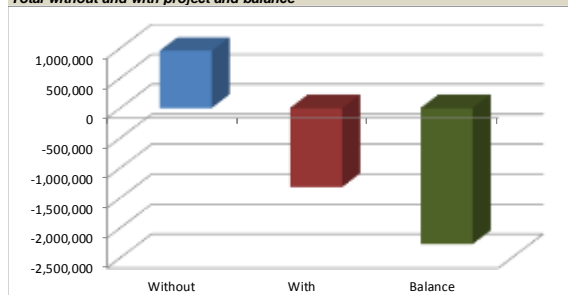
Fluxes per component



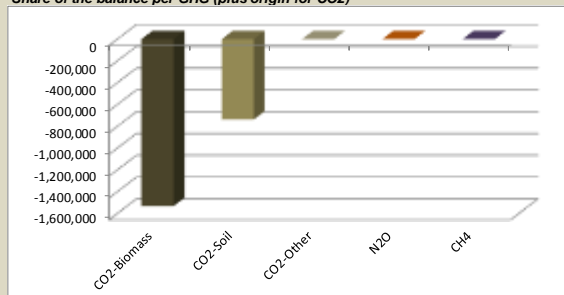
Balance per component



Total without and with project and balance



Share of the balance per GHG (plus origin for CO2)



Evolutions of land use / category (hectares - ha)

		Initial State	Without project	With project
Forest/Plantation		62,434	56,546	59,720
Agriculture	Annual	6,625	12,513	3,514
	Perennial	0	0	7,225
	Rice	0	0	0
Grassland		600	600	0
Other lands	Degraded	800	800	0
	Other	0	0	0
Wetlands		0	0	0
Total area (ha)		70,459	70,459	70,459

Uncertainty level

		% of uncertain
Gross fluxes		
Without	952,841	35.2
With	-1,318,390	44.7
Net balance	-2,271,231	46.3

Detailed matrices of changes

Other indicators

Area Irrigated - ha		Initial State	Without project	With project
	Irrigated rice	0	0	0
	Annual Crops	0	0	0
	Total	0	0	0
Cumulated areas burnt - ha		Without project	With project	
	From deforestation	0	0	
	From degradation	0	0	
	Afforestation	0	0	
	Other LUC	0	0	
	Annual	0	0	
	Perennial	0	0	
	Irrigated rice	0	0	
	Grassland	0	0	
Total		0	0	

Indirect lifetime GHG emission avoided

In the GEF Tracking Tool for Climate Change Mitigation projects, indirect emissions reductions are those attributable to the long-term outcomes of the GEF activities that remove barriers, such as capacity building, innovation, and catalytic action for replication.

The indirect carbon benefits would result from a combination of spontaneous take-up of sustainable (tree-rich) production systems as a result of the project's pilot work; expansion of the natural resource governance due to the bases laid by the project; and expansion of restoration due to the project's work on generating financial commitments from PES and corporate social responsibility (CSR).

The potential area for avoided deforestation is 60,000 ha. In addition, the scaling-up activity includes 500 ha of new restoration/regeneration, and in total 7,000 ha for improved agroforestry and agro-sylvo pasture systems in sustainable forest management practices. The total coverage of indirect potential benefit area for the carbon calculation is 67,500 ha.

For the estimation of indirect lifetime GHG emission avoided during 20 years (5 years of implementation phase and 15 years of capitalization phase), the following variables and assumptions are used for the calculation. The EX-ACT results file is available:

Variable	Value	Unit	Note
Lifetime length for direct GHG emission avoided	20	years	5-year implementation phase plus 15-year capitalization phase
Climate, and Moisture regime	Tropical Moist	-	EX-ACT data
Dominant Regional Soil Type	High activity clay Soils	-	EX-ACT data
Area for GHG emissions calculation in EXACT	67,500	ha	Project potential target
Target indirect benefit area via forest protection	60,000	ha	Project potential target
Forest cover loss during 5 years without project (baseline)	5,658	ha	Project estimation based on the field survey at an annual deforestation rate of 1.89%. Deforestation for annual crop production based on historic rates of cattle herd expansion and deforestation for agriculture based on historic rates of population growth per province.
Forest cover loss during 5 years with project through forest protection activity (project target)	3,377	ha	Project target estimation: the project will reduce deforestation over 5 years to 60% of the without-project level.
Area of avoided deforestation	2,281	ha	
Target benefit area via forest plantation in degraded land	500	ha	Project potential target
Target indirect benefit area of existing degraded agriculture and ranches via agroforestry systems	7,000	ha	Project potential target through improved agroforestry systems (6,400 ha) and agrosylvopasture system (600 ha)
Tier 2 values for above- and below-ground carbon stock (stem, branches, leaves, roots)	120	tC/ha	Adapted Tier 2 default values for Zone 4 (Tropical shrub land)

and soil carbon			
Baseline annual firewood consumption	16,000	Ton dry matter/year	Assumed the data as dry matter.
Target annual firewood consumption with project	10,000	Ton dry matter/year	Project target. Assumed the data as dry matter.

The estimated values of lifetime indirect GHG emission avoided during 20 years (5 years of implementation phase and 15 years of capitalization phase) are as follows:

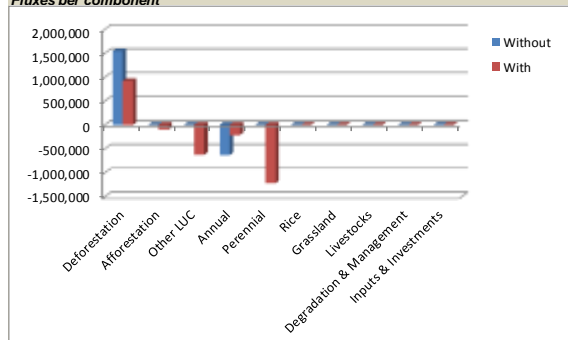
Management Regime	Target benefit area (ha)	Lifetime Indirect GHG emission avoided (tCO ₂ eq)
Forest Protection	60,000	622,048
Restoration/regeneration	500	95,831
Agroforestry and agro-sylvo pasture systems (sustainable forest management)	7,000	1,425,037
TOTAL	67,500	2,142,915

The indirect GHG emission mitigation potential from the project is estimated as 2,142,915 tCO₂eq, which is equivalent to about 1.6 tCO₂-eq per hectare per year in the considered biome and time frame.

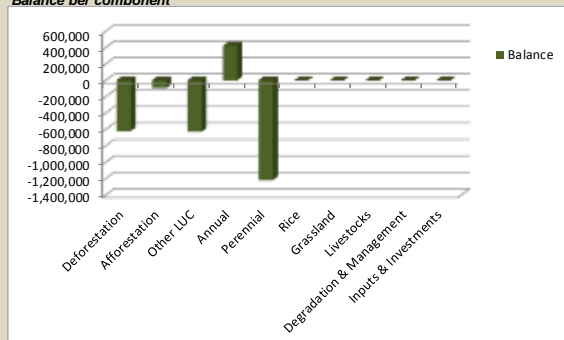
Table below provides the details of the indirect GHG fluxes as calculated with the EX-ACT during 20 years of project lifetime:

Project Name	Integrated Sustainable Land		Climate	Tropical (Moist)		Duration of the Project (Years)			20		
Continent	Oceania	Dominant Regional Soil Type		HAC Soils		Total area (ha)			67500		
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year		
	Without	With	Balance	CO ₂			N ₂ O	CH ₄	Without	With	Balance
	All GHG in tCO ₂ eq Positive = source / negative = sink			Biomass	Soil	Other					
Land use changes											
Deforestation	1,542,984	920,936	-622,048	-374,692	-247,355		0	0	77,149	46,047	-31,102
Afforestation	0	-95,831	-95,831	-25,969	-69,861		0	0	0	-4,792	-4,792
Other LUC	0	-626,779	-626,779	67,247	-694,027		0	0	0	-31,339	-31,339
Agriculture											
Annual	-633,372	-209,522	423,850	0	423,850		0	0	-31,669	-10,476	21,192
Perennial	0	-1,220,217	-1,220,217	-1,134,467	-85,750		0	0	0	-61,011	-61,011
Rice	0	0	0	0	0		0	0	0	0	0
Grassland & Livestocks											
Grassland	0	-715	-715	0	-715		0	0	0	-36	-36
Livestocks	0	0	0	0	0		0	0	0	0	0
Degradation & Management	0	0	0	0	0		0	0	0	0	0
Inputs & Investments	3,584	2,408	-1,176			-1,176	0		179	120	-59
Total	913,196	-1,229,720	-2,142,915	-1,467,881	-673,859	-1,176	0	0	45,660	-61,486	-107,146
Per hectare	14	-18	-32	-21.8	-10.0	0.0	0.0	0.0			
Per hectare per year	0.7	-0.9	-1.6	-1.1	-0.5	0.0	0.0	0.0	0.7	-0.9	-1.6

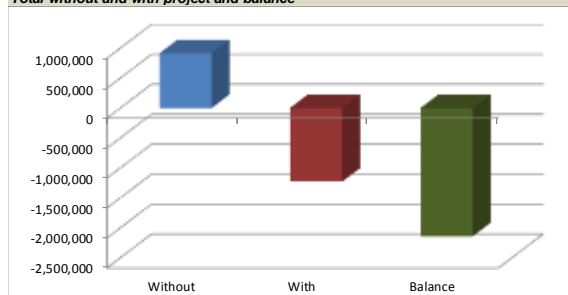
Fluxes per component



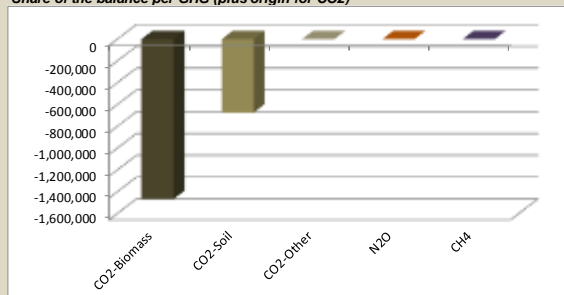
Balance per component



Total without and with project and balance



Share of the balance per GHG (plus origin for CO₂)



Evolutions of land use / category (hectares - ha)

		Initial State	Without project	With project
Forest/Plantation		60,000	54,342	57,123
Agriculture	Annual	6,400	12,058	3,377
	Perennial	0	0	7,000
	Rice	0	0	0
Grassland		600	600	0
Other lands	Degraded	500	500	0
	Other	0	0	0
Wetlands		0	0	0
Total area (ha)		67,500	67,500	67,500

Uncertainty level

		% of uncertain
Gross fluxes		
Without	913,196	35.2
With	-1,229,720	45.0
Net balance	-2,142,915	46.5

Detailed matrices of changes

Other indicators

Area Irrigated - ha		Initial State	Without project	With project
Irrigated rice		0	0	0
	Annual Crops	0	0	0
	Total	0	0	0
Cumulated areas burnt - ha			Without project	With project
From deforestation			0	0
	From degradation		0	0
	Afforestation		0	0
	Other LUC		0	0
	Annual		0	0
	Perennial		0	0
	Irrigated rice		0	0
Grassland			0	0
	Total		0	0

ANNEX 7: CURRENT AND DESIRED STATUS OF PA MANAGEMENT CAPACITIES IN THE TARGET LOCALITIES

Notes:

¹Rating range is from 0-3 except for sub-categories a, b and c which are 0-1

²*Italic text in targets column is METT targets; non-italic text is targets adapted to Vanuatu context*

³SP = South Pentecost, NE = North Efate, MBT = Middle Bush Tanna, An = Aneityum

METT criteria	Desired conditions in the local context ^{1,2}
1) Legal status: Does the PA have legal status (or in the case of private reserves is covered by a covenant or similar)?	3. <i>The PA has been formally gazetted/covenanted.</i> CCAs and MPAs should be formally recognised by local Councils of Chiefs, provincial governments, and registered with the national government.
2) PA regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	3: <i>Regulations for controlling inappropriate land use and activities in the PA exist and provide an excellent basis for management:</i> regulations should be approved by the Council of Chiefs and provincial governments.
3) Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce PA rules well enough?	3: <i>The staff have excellent capacity/resources to enforce PA legislation and regulations:</i> enforcement mechanisms should exist to ensure social control of infractions (e.g. through <i>kas</i> or <i>mba</i>) backed up where necessary by recourse to Government authorities/police.
4) PA objectives: Is management undertaken according to agreed objectives?	3: <i>The PA has agreed objectives and is managed to meet these objectives:</i> objectives should have been agreed and formalised between PA landowners, local Council of Chiefs and provincial government.
5) PA design: Is the PA the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	2: <i>PA design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes).</i> Given the emphasis on the Vanuatu PA system on community-driven and owned initiatives, design may not necessarily be optimal from the global conservation perspective but should conform to local communities' wishes and so be acceptable and sustainable.
6) PA boundary demarcation: Is the boundary known and demarcated?	3: <i>The boundary of the PA is known by the management authority and local residents/neighbouring land users and is appropriately demarcated:</i> physical demarcation is not absolutely necessary so long as limits are well known and agreed between management and local communities.
7) Management plan: Is there a management plan and is it being implemented?	3: <i>A management plan exists and is being implemented:</i> copies of the management plan should be held by DEC, local council of chiefs, provincial government and landowners (in a format understandable to them)
7a) Planning process:	1: <i>The planning process allows adequate opportunity for key stakeholders to input into the management plan:</i> the PA should have been discussed in island-wide fora which identified key stakeholders, and the interests of all of these should be considered in the formulation and review of the plan
7b) Planning process:	1: <i>There is an established schedule and process for periodic review and updating of the management plan:</i> plans should be reviewed with participation of all key stakeholders
7c) Planning process:	1: <i>The results of monitoring, research and evaluation are routinely incorporated into planning.</i> DEC or NGOs should ensure that monitoring, research and evaluation findings are fed into plan updating processes and help stakeholders to understand them.
8) Regular work plan: Is there a regular work plan and is it being implemented?	3: <i>A regular work plan exists and all activities are implemented.</i> Work plan should be agreed and implemented by, or with full participation of, local communities.
9) Resource inventory: Do you have enough information to manage the area?	3: <i>Information on the critical habitats, species, ecological processes and cultural values of the PA is sufficient to support all areas of planning and decision making.</i> Resource inventories should have been carried out, together with studies of key global environmental values, ecological processes and conservation requirements, and of the ecosystem services provided.

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	and services generated; the results should be available to DEC, CSOs as appropriate, provincial governments and (in an understandable format) to all key local stakeholders.
10) Protection systems: Are systems in place to control access/resource use in the PA?	3: Protection systems are largely or wholly effective in controlling access/resources. Social (<i>kastom</i>) pressure should be effective, backed up where necessary by regional Government/police.
11) Research: Is there a programme of management-orientated survey and research work?	3: There is a comprehensive, integrated programme of survey and research work relevant to management needs. DEC should have defined a programme for research survey that makes provision for involvement of local stakeholders and feedback to them.
12) Resource management: Is active resource management being undertaken?	3: Requirements for active management of critical habitats, species, ecological values and, cultural values are being substantially or fully implemented. Management should have been defined and agreed with local communities and implemented with full participation.
13) Staff numbers: Are there enough people employed to manage the PA?	3: Staff numbers are adequate for the management needs of the PA. CCAs and MPAs do not necessarily require external staff; however, roles and responsibilities for management should be defined and agreed among local stakeholders.
14) Staff training: Are staff adequately trained to fulfill management objectives?	3: Staff training and skills are aligned with the management needs of the PA. CCAs and MPAs do not necessarily require external staff, but if not local stakeholders should have the required management skills and knowledge.
15) Current budget: Is the current budget sufficient?	2: The available budget is acceptable but could be further improved to fully achieve effective management. CCAs and MPAs will normally require limited budget but should at least be sufficient to cover maintenance of visitor facilities and signage, ongoing stakeholder consultation and updating of management plan/work plans.
16) Budget security: Is the budget secure?	2: There is a reasonably secure core budget for regular operation of the PA but innovations and initiatives are reliant on outside funding. Monitoring and research should rely on outside funding due to the small, dispersed nature of the PAs.
17) Budget management: Is the budget managed to meet critical management needs?	3: Budget management is excellent and meets management needs. Budget management should be overseen by council of chiefs and provincial government.
18) Equipment: Is equipment sufficient for management needs?	3: There are adequate equipment and facilities. Equipment and facilities may be limited but should meet basic management needs.
19) Equipment maintenance: Is equipment adequately maintained?	3: Equipment and facilities are well maintained. Responsibilities for maintenance should be defined, and quality of maintenance overseen, by provincial government and local stakeholders.
20) Education and awareness: Is there a planned education programme linked to the objectives and needs?	3: There is an appropriate and fully implemented education and awareness programme. All local stakeholders should be aware of the PA and its objectives through multi-stakeholder participation mechanisms.
21) Planning for land and water use: Does land and water use planning recognise the PA and aid the achievement of objectives?	3: Adjacent land and water use planning fully takes into account the long term needs of the PA. The landscape within the PA is located should be subject to landscape-wide planning and regulation through multi-stakeholder mechanisms.
21a). Land and water planning for habitat conservation:	1: Planning and management in the catchment or landscape containing the PA incorporates provision for adequate environmental conditions (e.g. volume, quality, timing of water flow, air pollution levels etc) to sustain relevant habitats. As adjacent landscape within the PA is located should be subject to landscape-wide planning and regulation through multi-stakeholder mechanisms.
21b) Land and water planning for habitat conservation:	1: Management of corridors linking the PA provides for wildlife passage to key areas outside the PA (e.g. to allow migratory fish to travel between freshwater spawning grounds).

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	and the sea, or to allow animal migration). As above: the landscape within the located should be subject to landscape-wide planning and regulation through multi-stakeholder mechanisms, informed by scientific studies.
21c) Land and water planning for habitat conservation:	1: Planning addresses ecosystem-specific needs and/or the needs of particular concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.) As above: the landscape within the PA is located should be subject to landscape-wide planning and regulation through multi-stakeholder mechanisms, informed by scientific studies.
22) State and commercial neighbours: Is there co-operation with adjacent land and water users?	3: There is regular contact between managers and neighbouring official or commercial and water users, and substantial co-operation on management. State and commercial neighbours (e.g. tourism and ranching operators) should be involved in multi-stakeholder decision-making processes.
23) Indigenous people: Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?	3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management. All relevant local stakeholders should be involved in multi-stakeholder planning and management mechanisms and their interests taken into account in management planning.
24) Local communities: Do local communities resident or near the PA have input to management decisions?	3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management. All relevant local stakeholders should be involved in multi-stakeholder planning and management mechanisms and their interests taken into account in management planning.
24 a) Impact on communities:	1: There is open communication and trust between local and/or indigenous people, stakeholders and PA managers. PAs should be primarily managed by local communities and all relevant local stakeholders should be involved in management decisions.
24 b) Impact on communities:	1: Programmes to enhance community welfare, while conserving PA resources, are implemented. A proportion of revenues from tourism, PES etc. is reinvested in community development programmes.
24 c) Impact on communities:	1: Local and/or indigenous people actively support the PA. The PA is a community initiative or at least is expressly supported by the landowners, other local community members, the local council of chiefs and provincial government.
25) Economic benefit: Is the PA providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	2: There is some flow of economic benefits to local communities. Local communities should take advantage of any opportunities for ecosystem-based income generation, owning and managing the businesses (such as ecotourism).
26) Monitoring and evaluation: Are management activities monitored against performance?	3: A good monitoring and evaluation system exists, is well implemented and used to guide adaptive management. Resource status is monitored by DEC/CSOs, and appropriate indicators are also applied by local people to guide their management decisions.
27) Visitor facilities: Are visitor facilities adequate?	2: Visitor facilities and services are adequate for current levels of visitation but need to be improved. Visitor facilities and services need only be relatively modest, in keeping with the model of adventure/ecotourism that is envisaged.
28) Commercial tourism operators: Do commercial tour operators contribute to PA management?	3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain PA values. In the project context, it is essential for tourism operators to cooperate closely with, and contribute to, local community management in accordance with PA management objectives; ideally the tourism operations should be owned and managed by the communities themselves.
29) Fees: If fees (i.e. entry fees or fines) are applied, do they help PA management?	2: Fees are collected and make some contribution to the PA and its environs. If fees are collected, all fees should be managed transparently and a significant proportion should be used for the benefit of the PA and the local communities in general; however, given that

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	all on customary land it is acceptable for a proportion of the fees to accrue with recognised landowners, in accordance with rules agreed by local stakeholders and council of chiefs.
30) Condition of values: What is the condition of the important values of the PA as compared to when it was first designated?	3: Biodiversity, ecological and cultural values are predominantly intact. It is to be expected that given the relatively low levels of threats and conflict, and the existence of traditional social control mechanisms, PA values can be maintained to a high degree.
30a) Condition of values:	1: The assessment of the condition of values is based on research and/or monitoring. Conditions should be monitored in conjunction between DEC/NGOs and local communities, enabling the communities to come to their own conclusions regarding conservation effectiveness.
30b) Condition of values	1: Specific management programmes are being implemented to address threats to biodiversity, ecological and cultural values. The locally agreed management plan should make specific provisions for addressing the identified threats.
30c) Condition of values:	1: Activities to maintain key biodiversity, ecological and cultural values are a requirement of park management. It is to be expected that specific activities are being undertaken with the participation of local communities, to address identified threats.