



## PROGRAM FRAMEWORK DOCUMENT (PFD)

**TYPE OF TRUST FUND: GEF Trust Fund**

**TYPE OF PROGRAM: Program Accessible to All GEF Agencies**

### PART I: PROGRAM IDENTIFICATION

Program Title	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		
Country(ies)	Cook Islands, FS Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu	GEF Program ID:	5395
Lead GEF Agency:	UNDP	GEF Agency Program ID:	5217
Other GEF Agencies:	UNEP, FAO	Submission Date:	April 5, 2013
		Resubmission Date:	April 15, 2013
		Resubmission Date:	April 17, 2013
Other Executing Partners	SPC/SOPAC; Various national government agencies in the Pacific Island Countries	Program Duration (months)	60
GEF Focal Area(s):	Biodiversity Climate Change Mitigation Climate Change Adaptation (LDCF) International Waters Land Degradation MFA (SFM) Climate Change Adaptation (SCCF)*	Agency Fee (\$)	7,463,277

\*SCCF funding will be applied for towards the end of 2013. The indicative amount for SCCF is \$6.0 million.

### A. FOCAL AREA STRATEGY FRAMEWORK

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Type of Trust Fund	Indicative Financing	Indicative Cofinancing
BD-1	1.1: Improved management effectiveness of existing and new protected areas. 1.2: Increased revenue for protected area systems to meet total expenditures required for management	New protected areas (number) and coverage (hectares) of unprotected ecosystems  Sustainable financing plans (number)	GEF TF	24,736,160	65,943,265
BD-2	2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks	Policies and regulatory frameworks for production sectors National and sub-national land-use plans that incorporate biodiversity conservation and ecosystem services valuation	GEF TF	9,533,394	26,976,790

BD-5	Outcome 5.1 Development and sectoral planning frameworks at country level integrate measurable biodiversity conservation and sustainable use targets	Development and sectoral planning frameworks that include measurable biodiversity conservation and sustainable use targets in the following sectors: agriculture, fisheries and tourism sectors	GEF TF	100,000	2,997,421
LD-1	1.1: An enhanced enabling environment within the agricultural sector 1.2: Improved agricultural management 1.3: Sustained flow of services in agro-ecosystems	National policies that guarantee small holder and community tenure security  Types of innovative SL/WM practices introduced at field level  Suitable LS/WM interventions to increase vegetative cover in agroecosystems	GEF TF	6,078,624	23,979,369
LD-2	Enhanced enabling environment within forest environments in drylands Improved forest management drylands Functionality and cover of forest ecosystems in drylands maintained	National policies that guarantee small holder and community tenure security  Types of innovative SFM practices introduced at field level  Suitable SFM interventions introduced	GEF TF	582,954	8,992,263
LD-3	3.2: Integrated landscape management practices adopted by local communities	Integrated land management plans developed and implemented INRM tools and methodologies developed and tested	GEF TF	4,143,427	8,992,263
CC-5	Restoration and enhancement of carbon stocks in forests and non-forest lands	Forest and non-forest lands under good management practices	GEF TF	4,137,844	23,979,369
IW-1	1.1 Incorporation of national policy reforms on IWRM into national/local plans and actions 1.3: Innovative solutions implemented for reduced pollution, improved water use efficiency, sustainable fisheries with rights-based management, IWRM, water supply protection in SIDS, and aquifer and catchment protection	National and local policy and legal reforms adopted with functioning national inter-ministry committees  Types of technologies and measures implemented in local demonstrations and investments (number)  Enhanced capacity for issues of climatic variability and change and groundwater management	GEF TF	7,097,410	26,976,790
IW-3	3.1 Political commitment and capacity demonstrated for ICM integrating with existing IWRM commitments  3.2 On ground actions implemented for coastal habitat conservation of "blue forests"  3.3: IW portfolio capacity and performance enhanced from active learning/KM/experience sharing	National ICM-IWRM commitment in place, including coastal diagnostic analysis (number) and national inter-ministry committee oversight documented  Local ICM plans adopted (number)  Demonstration scale local actions piloted for ICM integrating with IWRM Active experience / sharing / learning practiced in the IW portfolio, including through GEF IW:LEARN	GEF TF	4,140,000	32,971,633
SFM-1	1.1: Enhanced enabling environment within the forest sector and across sectors	Forest area under sustainable management, separated by forest type	GEF TF	4,113,731	8,992,263

	1.2: Good management practices applied in existing forests	Payment for ecosystem services (PES) systems established			
SFM-2	2.1: Enhanced institutional capacity to account for GHG emissions reduction and increase in carbon stocks 2.2: New revenue for SFM created through engaging in the carbon market	National forest carbon accounting system designed and peer reviewed ready for implementation  Innovative national financing mechanisms designed using established models and customized	GEF TF	767,100	2,997,421
CCA-1	1.1: Mainstreamed adaptation in broader development sectors frameworks at country level and in targeted vulnerable coastal areas  1.2: Reduced vulnerability in development sectors	Adaptation measures and necessary budget allocations included in relevant frameworks  Resilient infrastructure measures introduced to prevent economic losses  Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability	LDCF	3,936,129	29,974,212
CCA-2	2.1: Increased knowledge and understanding of climate variability and change-induced risks at country level and in targeted vulnerable areas	Risk and vulnerability assessments conducted and updated  Systems in place to disseminate timely risk information	LDCF	3,800,000	11,989,686
CCA-3	3.1 Successful demonstration, deployment and transfer of relevant adaptation technology in targeted areas	Relevant adaptation technology transferred to targeted groups	LDCF; (SCCF*)	4,000,000 (6,000,000)	23,979,370
<b>Sub-Total</b>					
GEFTF				65,430,644	
LDCF				11,736,129	299,742,115
Total				77,166,773	
<b>Program Management Cost</b>					
GEFTF				4,971,716	
LDCF				786,807	33,304,679
Total				5,758,523	
<b>Total Program Costs</b>					
GEFTF				70,402,360	
LDCF				12,522,936	333,046,794
Total				82,925,296	

\*Application for SCCF at an indicative amount of \$6.0 million will be done in late 2013.

## B. PROGRAM RESULTS FRAMEWORK

**Program Goal: To maintain and enhance Pacific Island countries' (PICs) ecosystem goods and services (provisioning, regulating, supporting and cultural) through integrated approaches to land, water, forest, biodiversity and coastal resource management that contribute to poverty reduction, sustainable livelihoods and climate resilience**

Program Component	Grant Type	Expected Outcomes	Expected Outputs	Type of Trust Fund	Indicative Financing (\$)	Indicative Cofinancing (\$)
National Multi-focal Area	INV	Ridge-to-Reef approach achieved in demonstration sites through the scaling	Catchment level and coastal area integrated approaches (ICM/IWRM) introduced and/or scaled up in	GEFTF LDCF Total	38,396,925 7,825,290 46,222,215	199,828,076

<p>Demonstrations in all Pacific Island Countries</p>		<p>up of IWRM and introduction of ICM towards integrated management of natural resources and to reduce watershed and coastal pollution in priority catchments</p> <p>Improved terrestrial and marine biodiversity conservation in priority catchments and linked coastal areas</p> <p>Carbon stocks restored and enhanced in priority catchments and coastal areas</p> <p>Sustainable forest management (SFM) achieved through institutional strengthening, demonstration pilots and innovative schemes in priority catchments</p> <p>Sustainable financing schemes developed to support biodiversity conservation and integrated approaches, including REDD+ in priority catchments</p> <p>Improved resilience to climate change of island ecosystems and communities in priority catchments</p>	<p>priority sites for 14 PICs</p> <p>Measurable pollution reduction, enhanced water use efficiency, other measurable IWRM impacts, and SLM implemented in Ridge-to-Reef national pilot demonstration sites in 14 PICs</p> <p>New terrestrial protected areas declared and protected in at least 6 PICs</p> <p>Coastal 'blue forest' conserved in critical sites in around 7 PICs.</p> <p>Reforestation and restoration of degraded forests in 7 watersheds in at least two PICs (Fiji and Tonga) resulting in the sequestration of CO<sub>2</sub></p> <p>Support for Reducing Emissions from Deforestation and Forest Degradation (REDD+) readiness through country dialogues and other schemes in around 4 PICs</p> <p>Innovative system-level sustainable financing plans and schemes (e.g., PES, trust funds) supported by valuation studies for protected areas and landscapes developed in around 5 PICs</p> <p>Climate change risk and vulnerability assessments conducted / updated / refined in priority sites in around 10 PICs and integrated into ICM-IWRM and land and forest management plans as well as diagnostic analyses.</p> <p>Integrated (including ecosystem-based) and community-based approaches implemented in sites in 10 PICs as noted in local plans</p>			
<p>Improved Governance for Integrated, Climate resilient Land, Water, Forest and Coastal Management</p>	<p>TA</p>	<p>Enhanced policies, regulations and institutions for integrated Ridge-to-Reef approaches in place in PICs</p> <p>National and local capacities for ICM, IWRM, SLM and SFM improved to enable best practice in integrated,</p>	<p>Integrated policy frameworks at the national and sub-national levels towards combined land, water, forests and coastal and biodiversity management formulated and adopted in all PICs</p> <p>Climate smart policies and approaches mainstreamed in broader policy frameworks for an expected at least 4 PICs to reduce vulnerabilities of communities and enhance the</p>	<p>GEFTF LDCF Total</p>	<p>19,179,802 3,127,226 22,307,028</p>	<p>66,609,359</p>

		<p>climate resilient Ridge-to-Reef approaches in natural resource management</p>	<p>resilience of land, water, forest and coastal resources to climate fluctuations</p> <p>Inter-ministerial committees developed and functioning in at least ¾ of PICs to facilitate national coordinated action required for integrated Ridge-to-Reef approaches and incorporation into national budget planning</p> <p>Training needs assessment conducted and effective mechanisms for transfer of knowledge and skills in integrated approaches in environment and natural resources management implemented in all national R2R projects and the regional project</p> <p>Advanced training in ICM/IWRM and other integrated (SLM, SFM) approaches to natural resources and environmental management and climate change adaptation conducted to benefit government staff in all PICs in collaboration with internationally-recognized institution(s) for the conduct of the training and use of training tools</p> <p>National human capacity strategies for mainstreaming R2R (ICM, IWRM, SLM, SFM) formulated and adopted in 14 PICs to accompany innovative post-graduate training program and mentoring/leadership programs.</p> <p>Local ICM plans show integration with IWRM and land and forest management plans in around 10 PICs</p> <p>National ICM policies demonstrate integration with national IWRM, SLM and SFM policies in around 10 PICs</p> <p>National coastal diagnostic analyses integrated with existing IWRM-related diagnostics in 14PICs National 'State of the Coast' Reports produced by year 3 in all 14 PICs</p>			
Regional and National/Local Ridge-to-Reef Indicators,	TA	National/local indicators and M&E system(s) for simplified and integrated approaches for R2R	National indicators and simplified M&E systems developed towards national level adoption and reporting by national inter-ministry committees	GEFTF LDCF Total	4,828,205 586,806 5,415,011	19,982,808

Monitoring and Evaluation and Knowledge Management		National and regional platforms for sharing of best practices and lessons learned in R2R	<p>and assembled annually for reporting by year 2.</p> <p>Integrated and simplified tracking tools developed for multi-focal area projects and communicated to GEF</p> <p>Informed decision makers at the national and local levels implement and mainstream integrated R2R approaches and climate adaptation</p> <p>Previous SIDS experience, best practice and lessons with ICM/IWRM demo best practices reviewed, codified and disseminated for a PIC-wide capacity building tool to be included in web portal.</p> <p>Lessons learned from soon to be completed GEF IWRM project captured and disseminated through various forms of appropriate media targeting policy makers, practitioners, the public and other audience</p> <p>One percent of IW budget supports the regional knowledge platform and contribute to IW:LEARN activities; appropriate amounts for knowledge-related platforms in other focal areas allocated to operationalize an integrated Ridge-to-Reef knowledge platform.</p>			
Regional Program Coordination	TA	Effective coordination of overall programme, national and regional projects delivers enhanced program effectiveness, efficiency and delivery.	<p>Functioning overall program coordination unit contributing to coordinated effort among STAR national projects in Yr 1</p> <p>Technical and operational support provided to national R2R projects to facilitate timely delivery of overall program goals</p> <p>National inter-ministerial committee oversight of integrated approaches and national reporting</p> <p>Pacific Ridge-to-Reef Network, on-line capacity building modules, and web portal consistent with GEF IW:LEARN guidance in place by year 2.</p>	GEFTF LDCF Total	3,025,712 196,807 3,222,519	13,321,872
<b>Subtotal</b>						
					GEFTF LDCF Total	65,430,645 11,736,128 77,166,773
						299,742,115

<b>Program Management Cost</b>		
GEFTF	4,971,716	
LDCF	786,807	
Total	5,758,523	33,304,679
<b>Total Program Costs</b>		
GEFTF	70,402,360	
LDCF	12,522,936	
Total	82,925,296	333,046,794

### C. INDICATIVE CO-FINANCING

Sources of Cofinancing	Name of Cofinanciers (if known)	Type of Cofinancing	Amount (\$)
National Governments	Governments of 14 PICs: Cook Islands, FS Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu	Grant	45,356,678
		In-kind	203,772,986
Local Governments	Governments of 14 PICs: Cook Islands, FS Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu	In-kind	4,855,208
GEF Agencies	UNDP	Grant	740,000
		In-kind	17,070,000
	UNEP	In-kind	400,000
		FAO	Grant
In-kind	500,000		
	Bilateral/Multilateral Agencies	AusAID; EU; JICA; SPC/SOPAC;GIZ; Pacific Environment Community Fund; Others	Grant
In-kind			29,313,000
Private Sector	Coca-Cola Company	Grant	1,000,000
NGO	WWF; TNC; Ipukarea Society (Cook Is); USP-Institute of Applied Science; Birdlife; Wildlife Conservation Society; Palau Community College-Cooperative Research Extension; Palau Conservation Society; Palau International Coral Reef Center; Protected Area Network Fund of Palau; Others	Grant	6,900,000
		In-kind	13,638,922
<b>Total</b>			<b>333,046,794</b>

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

GEF Agency	Type of Trust Fund	Focal area	Country Name / Global	Program amount (a)	Agency Fee (b)	Total (c=a+b)
UNDP	GEF TF	Biodiversity	Cook Is	1,963,303	176,697	2,140,000
UNDP	GEF TF	Land Degradation	Cook Is	458,716	41,284	500,000
UNDP	GEF TF	Climate Change	Cook Is	1,834,862	165,138	2,000,000

UNDP	GEF TF	International Waters	Global (Cook Is)	160,550	14,450	175,000
UNDP	GEF TF	Biodiversity	FS Micronesia	2,734,312	246,088	2,980,400
UNDP	GEF TF	Land Degradation	FS Micronesia	587,156	52,844	640,000
UNDP	GEF TF	Climate Change	FS Micronesia	1,357,798	122,202	1,480,000
UNDP	GEF TF	International Waters	Global (FS Micronesia)	160,550	14,450	175,000
UNDP	GEF TF	Biodiversity	Fiji	3,633,028	326,972	3,960,000
UNDP	GEF TF	Land Degradation	Fiji	541,284	48,716	590,000
UNDP	GEF TF	Climate Change	Fiji	1,834,862	165,138	2,000,000
UNDP	GEF TF	International Waters	Global (Fiji)	160,550	14,450	175,000
UNDP	GEF TF	Multifocal Area (SFM)	Global (Fiji)	1,467,890	132,110	1,600,000
UNDP	GEF TF	Biodiversity	Nauru	1,376,147	123,853	1,500,000
UNDP	GEF TF	Land Degradation	Nauru	458,716	41,284	500,000
UNDP	GEF TF	Climate Change	Nauru	733,945	66,055	800,000
UNDP	GEF TF	International Waters	Global (Nauru)	160,550	14,450	175,000
UNDP	GEF TF	Biodiversity	Niue	1,376,147	123,853	1,500,000
UNDP	GEF TF	Land Degradation	Niue	963,303	86,697	1,050,000
UNDP	GEF TF	Climate Change	Niue	1,834,862	165,138	2,000,000
UNDP	GEF TF	International Waters	Global (Niue)	160,550	14,450	175,000
UNDP	GEF TF	Biodiversity	Papua New Guinea	10,385,321	934,679	11,320,000
UNDP	GEF TF	Land Degradation	Papua New Guinea	844,037	75,963	920,000
UNDP	LDCF	Climate Change Adaptation	Global (Samoa)	12,522,936	1,127,064	13,650,000
UNDP	GEF TF	International Waters	Global (Samoa)	160,550	14,450	175,000
UNDP	GEF TF	Biodiversity	Tonga	834,862	75,138	910,000
UNDP	GEF TF	Land Degradation	Tonga	211,009	18,991	230,000
UNDP	GEF TF	Climate Change	Tonga	550,459	49,541	600,000
UNDP	GEF TF	International Waters	Global (Tonga)	160,550	14,450	175,000
UNDP	GEF TF	Biodiversity	Tuvalu	1,376,147	123,853	1,500,000
UNDP	GEF TF	Land Degradation	Tuvalu	541,284	48,716	590,000
UNDP	GEF TF	Climate Change	Tuvalu	1,834,862	165,138	2,000,000
UNDP	GEF TF	International Waters	Global (Tuvalu)	160,550	14,450	175,000
UNDP	GEF TF	International Waters	Global (Regional: Cook Is; FS Micronesia; Fiji; Kiribati; Nauru; Niue; Palau; Papua New Guinea; R. Marshall Islands; Samoa; Solomon Is; Tonga; Tuvalu; Vanuatu)	10,126,147	911,353	11,037,500
UNEP	GEF TF	Biodiversity	Palau	1,761,468	158,532	1,920,000
UNEP	GEF TF	Land Degradation	Palau	458,716	41,284	500,000
UNEP	GEF TF	Climate Change	Palau	0	0	0
UNEP	GEF TF	International Waters	Global (Palau)	160,550	14,450	175,000
UNEP	GEF TF	Multifocal Area (SFM)	Global (Palau)	743,119	66,881	810,000



UNEP	GEF TF	Biodiversity	Marshall Islands	1,761,468	158,532	1,920,000
UNEP	GEF TF	Land Degradation	Marshall Islands	412,844	37,156	450,000
UNEP	GEF TF	Climate Change	Marshall Islands	1,743,119	156,881	1,900,000
UNEP	GEF TF	International Waters	Global (Marshall Is)	160,550	14,450	175,000
FAO	GEF TF	Biodiversity	Kiribati	1,481,651	133,349	1,615,000
FAO	GEF TF	Land Degradation	Kiribati	284,404	25,596	310,000
FAO	GEF TF	Climate Change	Kiribati	1,766,055	158,945	1,925,000
FAO	GEF TF	International Waters	Global (Kiribati)	160,550	14,450	175,000
FAO	GEF TF	Multifocal Area (SFM)	Global (Kiribati)	1,177,370	105,963	1,283,333
FAO	GEF TF	Biodiversity	Tonga	458,716	41,284	500,000
FAO	GEF TF	Land Degradation	Tonga	366,972	33,027	400,000
FAO	GEF TF	Climate Change	Tonga	1,009,174	90,826	1,100,000
FAO	GEF TF	Multifocal Area (SFM)	Global (Tonga)	610,092	54,908	665,000
FAO	GEF TF	Biodiversity	Vanuatu	1,058,950	95,306	1,154,255
FAO	GEF TF	Land Degradation	Vanuatu	724,771	65,229	790,000
FAO	GEF TF	Climate Change	Vanuatu	1,651,376	148,624	1,800,000
FAO	GEF TF	International Waters	Global (Vanuatu)	160,550	14,450	175,000
FAO	GEF TF	Multifocal Area (SFM)	Global (Vanuatu)	1,145,036	103,053	1,248,089
<b>Total GEF TF Resources</b>				70,402,360	6,336,213	76,738,573
<b>Total LDCF Resources</b>				12,522,936	1,127,064	13,650,000
<b>Total Grant Resources</b>				82,925,296	7,463,277	90,388,573

Notes: a) Tonga will have two separate projects: one with UNDP and another with FAO; b) Application for SCCF for \$6.0 million will be made in late 2013.

## **PART II: PROGRAMATIC JUSTIFICATION**

### **A. GOAL OF THE PROGRAM:**

The **goal** of the Pacific Islands National Priorities Multi-Focal Area ‘Ridge-to-Reef’ (R2R) program is *to maintain and enhance Pacific Island countries’ ecosystem goods and services (provisioning, regulating, supporting and cultural) through integrated approaches to land, water, forest, biodiversity and coastal resource management that contribute to poverty reduction, sustainable livelihoods and climate resilience*. This goal will be achieved through a series of national multi-focal area R2R demonstration projects which will support and address national priorities and development needs while delivering global environmental benefits in line with GEF focal area strategies (Biodiversity, Land Degradation, Climate Change Mitigation, International Waters) and Climate Change Adaptation.

In this programme, the Pacific Islands Countries emphasize the need to focus on their own priority national activities as they utilize STAR resources. Experience has shown that an integrated approach from ridge to reef (and ocean--Ridge to Reef or R2R) is necessary for poverty reduction, sustainability, and capacity enhancement for small countries with few human resources to undertake projects. Hence, each country is planning to adopt specific aspects of R2R (see Section E for details). For example, Cook Island’s and Palau’s focus is on protected areas and their effectiveness. As a follow-up to the Cook Island’s approach, representative and sustainable national system of terrestrial, coastal and marine protected areas are to be complemented by appropriate sector practices in adjoining or upstream watersheds to mitigate threats to conservation from outside protected areas. Palau plans to focus on

managing the full range of its Protected Area Network in association with many areas not captured by the PAN. (areas targeted for sustainable land and forest management). It will focus on an integrated approach with regards to land-use management, forest management and water and coastal management to enhance their ecosystem services. Samoa is taking a different approach using LDCF resources. The occurrence of natural disasters underlines the vulnerability of Samoa and the need for a coordinated response that protects the lives and assets of the communities. The Government of Samoa through the LDCF programme intends to address the barrier of a fragmented policy and programmatic approach, by putting in place an enabling framework that will guide interventions on climate change adaptation/mitigation and DRR/DRM, and will make CC a priority of 'economic and social concern'. This will reflect integrated approaches and contribute to the R2R programme.

Fiji's R2R project will focus on enhancing integrated management of a series of forested watersheds to protect land, water, forest and biodiversity resources, maintain carbon stocks, and protect coastal mangrove and coral reef MPAs. Efforts in Kiribati will focus on creating a network of locally managed protected areas in remote atoll ecosystems and promoting sustainable land and water management practices for atoll land and agricultural systems. Nauru's project will link improving management of new marine conservation areas with community engagement in improved landscape and water resources management including through soil and water conservation measures and enhancing community water storage capacity. These on-the-ground efforts will be complemented by mainstreaming biodiversity and SLM into national policy and regulatory frameworks. Micronesia's project will support expansion of both marine and terrestrial protected areas in all four Micronesian states, complemented by support to integrated ecosystem management and restoration outside protected areas to enhance ridge to reef connectivity. Work in Niue will focus on establishing new terrestrial and marine protected areas and enhancing ecosystem connectivity across such areas, complemented by support to communities to manage their production activities outside designated conservation areas in an environmentally friendly manner.

PNG's R2R project will help to strengthen the government's operational capacity to effectively manage PNG's PA system, including efforts to strengthen the government's enforcement capabilities to address threats within its national parks. Marshall Islands' comprehensive Ridge to Reef project will protect RMI's atoll ecosystems and improve community well-being through improved water supply and sanitation, sustainable agricultural practices, community managed marine and terrestrial protected areas, and promotion of low carbon energy technologies. Tonga features two national Ridge to Reef projects that will strengthen and expand marine and terrestrial protected areas, enhance carbon storage through restoration of damaged forests and farmlands, build national climate resilience, and strengthen capacity for integrated water resources and coastal management. In Tuvalu, R2R will focus on strengthening protected areas management, rehabilitation of degraded coastal and inland forests, demonstrate small scale low carbon energy and water technologies, and support integrated water resources management. In Vanuatu, Ridge to Reef will focus on strengthening Vanuatu's protected area network, sustainable management of production landscapes, and landscape restoration and forest degradation.

The national demonstration projects are complemented by an International Waters regional Ridge to Reef project as well as in several cases with adaptation activities (SCCF and LCCF). The regional component complements the national R2R projects to foster links between the on-going GEF-supported integrated water resources management (IWRM) initiative and this emerging R2R demonstration work on integrated coastal management (ICM) and conservation of so-called 'blue forests' (coastal wetlands), while ensuring coordination, learning, and knowledge management among the national projects and development assistance partners.

Together, the national and regional projects that make up the Ridge to Reef program, not only respond to national priorities with global environmental benefits, but also responds to the Mauritius Strategy for Implementation and multiple sections of the Rio+20 Outcomes Document as a necessary step toward reducing poverty and sustaining island livelihoods. Innovative capacity building programs and partnership with the academic community would be key to sustaining program impact by developing local human capital and a network of local leaders/chiefs and would enable the transition to integrated ridge to reef approaches.

It is envisioned that this program will be the testing ground for longer term replication, mainstreaming and scaling up of innovative integrated natural resources management approaches that may be applicable for the Pacific SIDS and

other regions. The program is also designed to prepare the countries for up-scaling by providing the requisite supportive governance in terms of mainstreamed enabling policies, responsive institutions and trained personnel.

## **B. DESCRIPTION OF THE CONSISTENCY OF THE PROGRAM WITH:**

B. Description of Consistency of the Program with:

### B.1.1 The GEF/LDCF/SCCF focal area strategies

The Pacific Islands R2R program has been designed by the Pacific Island countries to strategically use their GEF STAR allocations to meet both their national priorities and adhere to relevant GEF focal area objectives, outcomes, indicators and outputs. Other than Papua New Guinea and Fiji, all the Pacific Island countries have STAR allocations less than \$7 million which allows them flexibility to program all of their STAR resources across individual or multiple focal areas and focal area strategies. Using this flexibility, each national R2R project (PIF) is being designed to deliver tangible and quantifiable global environmental benefits across one or more GEF STAR focal areas, strategies, and funds, including consistency with BD, LD, CC-M, CC-A (SCCF) and IW focal areas as well as SFM. The R2R approach provides the appropriate framework for multi-focal projects addressing environmental and natural resource management issues in priority catchments and their linked coastal areas. Actions in each focal area are intended to complement each other to promote a truly integrated approach in managing biological diversity and other natural resources. The program seeks to focus on innovation, testing, and catalyzing implementation of cutting-edge methodologies, technologies and policy reforms with the objective of enabling replication and future scaling-up of integrated R2R approaches. The following paragraphs outline consistency of the proposed projects within the program with GEF 5 focal area Strategic Objectives, while not all projects address all objectives:

**Biodiversity (BD) Strategy:** The R2R program promotes the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services through the improved management of existing and new protected areas, sector reforms to conserve and sustainable use biological diversity, and the incorporation of biodiversity conservation and sustainable use into planning frameworks. Three of the BD Strategic objectives for GEF 5 are addressed by projects in the program (**BD 1, 2, 5**). The program supports the development and implementation of comprehensive protected areas systems and helps build the capacity required to achieve their financial sustainability consistent with **BD-1: Improve Sustainability of Protected Area Systems** in order to strengthen PA management effectiveness. The program is consistent with **BD-2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors** in that it will increase and expand sustainably managed landscapes and seascapes that integrate biodiversity conservation while maintaining economic livelihoods that are closely tied to maintenance of healthy ecosystems. Watershed protection and sustainable forest management for water-related ecosystem services will translate seamlessly to biodiversity conservation along with incorporation of biodiversity conservation into policies and programs. Several national projects in the program aim to assist in meeting objective **BD-5: Integrate CBD Obligations into National Planning Processes through Enabling Activities**.

**Land Degradation (LD) Strategy:** The program seeks to contribute to arresting and reversing current trends in land degradation in the Pacific, which is aggravated by deforestation and unsustainable land management particularly in the more mountainous areas and other landscapes with fragile soils that are vulnerable to soil erosion. Three of the LD Strategic Objectives are addressed by projects in the program in an integrated fashion (**LD 1, 2, 3**). An enhanced enabling environment in the agriculture and forest sectors with their attendant national policy and institutional reforms will be complemented by innovative SLM practices in the pilot demo projects building on earlier enabling activities in the PICs in support of objectives **LD-1: Agriculture and Rangeland Systems: Maintain or improve flow of agro-ecosystem services sustaining the livelihoods of local communities** and **LD-2: Forest Landscapes: Generate sustainable flows of forest ecosystem services in drylands, including sustaining livelihoods of forest dependent people**. In particular, the program addresses objective 3 (**LD-3: Integrated Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape**) by reducing barriers to cross-sectoral collaboration (through adoption of integrated tools, including land-use plans and hazard area designation from the forested and agricultural uplands down to the tidal lowlands that so often receive adverse impacts from upstream agriculture and forestry activities). The program fosters the promotion of integrated landscape management practices adopted by local communities building on lessons

learned from community-based and participative interventions from the GEF/UNDP/UNEP Pacific IWRM Project. These demonstration initiatives run the gamut from investments in integrated watershed management through forest rehabilitation and conservation of degraded upland areas as well as conservation of riparian corridors and coastal/mangrove ecosystems.

**Climate Change Mitigation Strategy:** The program will support efforts to conserve and enhance carbon stocks through sustainable management of land use, land-use change, and forestry (LULUCF), and reduce GHG emissions by reducing forest degradation pressures on these lands in the wider R2R landscape. **CCM-5: LULUCF:** *Promote conservation and enhancement of carbon stocks through sustainable management of land use, land-use change, and forestry.* Many of the national projects will be linked, where opportunities exist, with cross-cutting Sustainable Forest Management (SFM) objectives and generate measurable reductions in GHG emissions. Several mitigation objectives will be achieved through the proposed national Project work on regulatory frameworks and through targeted activities at the regional level which aim to increase the commitment and strengthen the processes for mitigation of GHG emissions in protected area and forest management.

**Sustainable Forest Management SFM/REDD PLUS Strategy:** Two of the SFM objectives for GEF 5 are addressed by projects in the program (SFM 1, 2). The program will achieve multiple environmental benefits from improved management of forests, in conformance with the GEF-5 strategy for SFM which aims to reduce pressures on forest resources and generate sustainable flows of forest ecosystem services and strengthen the enabling environment to reduce GHG emissions from deforestation and forest degradation and enhance carbon sinks from LULUCF activities. The two objectives that are addressed by the program are **SFM 1: Forest Ecosystem Services:** *Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services* and **SFM 2: Reducing Deforestation:** *Strengthen the enabling environment to reduce GHG emissions from deforestation and forest degradation and enhance carbon sinks from LULUCF activities.* These GEF strategy objectives will be achieved through SFM promoted in-field activities that are integrated with forest biodiversity conservation, sustainable land management and climate change adaptation, consistent with the relevant country GEF-5 priorities. Management regimes are to be introduced that strengthen conservation, sustainable management of forests and enhancement of forest carbon stocks will be supported, including the development of regulatory and institutional framework and the necessary tools. Projects under the Program will support the sustainable land management interventions articulated under the UNCCD National Plans of Action (NAPs) of the participating PICs.

**Climate Change Adaptation Strategy.** The program supports the PICs to become climate resilient by promoting both immediate and longer-term adaptation measures in development policies, plans, programs, projects and actions. It is aimed at reducing economic losses and social costs due to climate change, including from increased variability and more extreme climatic conditions of storms, droughts, floods, and sea-level rise.

Two of the CC-A GEF 5 objectives are addressed by projects in the program with funding through the SCCF<sup>1</sup> (CC-A 1, 2). As noted in B.1.2, the projects are consistent with 8 of the 9 program priority areas for adaptation. Through the national and regional projects, the program helps PICs mainstream adaptation into the development sectors, ICM, and IWRM as well as updating risk and vulnerability assessments to include the R2R approach consistent with **CCA-2: Increasing Adaptive Capacity:** *Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level.* Additionally, the pilot demonstrations will help reduce vulnerability and strengthen physical, natural, and social assets consistent with **CCA-1: Reducing Vulnerability:** *Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level, including pilot operations through the LDCF for Samoa.*

**International Waters (IW) Strategy (IW Strategic Objectives 1, 3):** The program seeks to test cross-focal area (which means also cross-sector), integrated management of catchments, aquifers, and coastal/marine ecosystems of the Pacific Islands. The strategy of testing this R2R integrated management approach implemented through national multi-focal projects based on national priorities, complemented by a regional multi-focal project (consisting mostly of IW funding) poses serious coordination, cooperation, learning, experience sharing, and administrative costs for the PICs but is the

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<sup>1</sup> This Program will submit a proposal to SCCF in fall of 2013 to complement funds from the GEFTF. The description of the activities that will be financed will be determined at that time. The descriptions provided here are preliminary.

only way to achieve a sustainable future for these vulnerable island states. The regional multi-focal project is primarily under the IW focal area and SCCF but also from IW and SCCF. Two of the IW Strategic Objectives are addressed by projects in the program (**IW 1, 3**). It is supportive of focal area strategic objective IW-1 for implementing IWRM where previously introduced (**IW-1: Transboundary Basins/ Aquifers Catalyze multi-state cooperation to balance conflicting water uses in trans-boundary surface and groundwater basins while considering climatic variability and change (and for SIDS IWRM)**) and supportive of objective IW-3 for building capacity and national commitments toward integrated ICM-IWRM R2R approaches as well as testing these practical on-the-ground approaches across focal areas to sustain communities in the face of increasing climatic fluctuations (**IW-3: IW Capacity Building: Support foundational capacity building, portfolio learning, and targeted research needs for joint, ecosystem-based management of trans-boundary water systems, including ICM**). For those countries wishing to adopt integrated approaches with water-related outcomes, an increment of GEF funding consistent with IW-3 and its ‘Learning by doing’ capacity building involving local pilot demonstration work included in a number of the national projects.

**B.1.2. For programs funded from LDCF/SCCF: the LDCF/SCCF [eligibility criteria and priorities](#):**

All participating countries are parties to the UNFCCC and thereby are eligible to receive financial support for integrating climate change adaptation activities into their development activities. While all PICs are eligible for the SCCF, discussions continue on LDCF funding for Samoa. The use of SCCF funding under the program, is consistent with the SCCF eligibility criteria and priorities (as per Decision 28/CP.7). In particular the proposed program addresses 7 of the 9 SCCF programming priority areas for adaptation as part of the multi-focal, integrated approach: 1) water resources management; 2) land management; 3) agriculture; 4) infrastructure development; 5) fragile ecosystems, including mountainous ecosystems; 6) integrated coastal zone management; 7) supporting capacity building, including institutional capacity, for preventive measures, planning, preparedness and management of disasters relating to climate change, including contingency planning, in particular for droughts and floods in areas prone to extreme weather events.

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

The R2R program has been designed to complement the implementation of relevant national priorities including the CBD National Biodiversity Strategy & Action Plan (NBSAP), UNFCCC NAPA, UNFCCC National Communications, REDD+ Policies, UNCCD National Action Plans, National Sustainable Development Strategies and other documents. For each country, the relevance of this program to the implementation of the various strategies under the relevant Conventions is described in **Annex C**.

**Table 1. Status of National Strategies of Relevance to the R2R Program**

Country	Date of completion of latest national strategies				
	NBSAP – UNCBD	NC – UNFCCC, REDD+ Policy, Climate Change Policy	NAP – UNCCD	NAPA (for LDCs only)	National Development Strategies(latest)
1. Cook Islands	NBSAP, 11/04/2002 4 <sup>th</sup> National Report, 14/0//2011	SNC, December 2011	-	N/A	NSDP, 2011-2015
2. Federated States of Micronesia	NBSAP, 02/05/2002	FNC (hard-copy only), 04/12/1997	-	N/A	SDP, 2004-2023
3. Fiji	Implementation Framework 2010-2014 for the NBSAP 2007	REDD+ Policy 2011, National Climate Change Policy 2012	NAP, June 2007	N/A	RDSSD, 2010-2014
4. Kiribati	NBSAP, October 2006	National Framework on Climate Change (2013), Kiribati Integrated Environment Policy (2012)	-	NAPA, January 2007	KDP, 2012-2015
5. Nauru	Draft NBSAP, 2010	FNC, 30/10/1999	-	N/A	NSDS, 2005-2025
6. Niue	NBSAP, 20/03/2002	Niue Climate Change Policy (2009)	NAP, 2004	N/A	NNSP, 2009-2013
7. Palau	NBSAP, 03/06/2008	Natural Heritage Reserve System Act 1991, Palau Forest Management Plan	NAP, December 2004	N/A	MTDS, 2009-2014

8. Papua New Guinea	NBSAP, October 2007	1994, Mangrove Management Plan 1999 FNC, November 2000	-	N/A	MTDP, 2011-2015
9. Republic of Marshall Islands	NBSAP, 2000	FNC, 01/09/2000	-	N/A	SDPF, 2003-2018
10. Samoa	NBSAP, undated	SNC (GHGI), 01/03/2008	-	NAPA, December 2005	SDS, 2012-2016
11. Solomon Islands	NBSAP, 19/04/2010	FNC, 29/09/2004	-	NAPA, December 2008	
12. Tonga	NBSAP, June 2006	SNC, 02/05/2012	-	N/A	NSPF, 2010-2014
13. Tuvalu	NBSAP, September 2011	NSAP, 30/10/1999	NAP, July 2006	NAPA, July 2007	TK-II, 2005-2015
14. Vanuatu	NBSAP, November 1999	FNC, 30/10/1999	-	NAPA, March 2009	PAA, 2006-2015

**Table 2. IWRM Planning Instruments in Place in PICs**

IWRM Planning Elements in Place					
	IWRM Demo Project	Diagnostic Reviews	Strategic Policy statement	Implementation Plans	Coordination
Niue	Protection of Alofi town groundwater supply and nearshore reef fishery	Diagnostic Report National Outlook	National IWRM Policy	Draft IWRM Plan (uncosted)	National Water Committee
Tuvalu	Integrated Sustainable Wastewater Management for Tuvalu	Diagnostic Report National Outlook	National Water and Sanitation Policy	Tuvalu's Climate Change Adaptation framework includes	National Water Coordinating Committee
Cook Is	Integrated Freshwater and Coastal Management on Rarotonga	Diagnostic Report National Outlook	Draft National Water Policy	Commenced development of IWRM Plan	National Water Committee
Samoa	Integrated Freshwater and Coastal Management of Apia Catchment	Diagnostic Report	Water Resources Policy Water Services Policy	Plan & Framework for Action, WS Investment plan	Water Sector Steering Committee (& working groups)
Tonga	Sustainable management of Vava'u's Groundwater Resource	Diagnostic Report National Outlook	Draft Water Policy	Draft Implementation Plan for Water Act in progress	National Water Coordinating Committee
RMI	Integrated Water management Plan for Laura lens in Majuro	Diagnostic Report National Outlook	Draft National Water Policy Framework	Draft IWRM Investment Plan in progress	National Water Coordinating Committee
FSM	Protecting Water Quality in Pohnpei and Chuuk State	Diagnostic Report National Outlook	Draft National Water Policy Framework	Draft IWRM Investment Plan in progress	National Water Coordinating Committee
Palau	Ngerikil watershed resoration for the improvement of water quality	Diagnostic Report National Outlook	National Water Policy	Draft IWRM Investment Plan in progress	National Water Coordinating Committee
Kiribati	Not a participant in GEF IWRM Demo Project	Diagnostic Report	National Water Resources & Sanitation Policies	WR & San Implementation Plan (uncosted)	National Watsan Coord' Committee (low activity)
Nauru	Better water management & reduced contamination of groundwater	Diagnostic Report National Outlook	National Water, Sanitation & Hygiene Policy	Watsan Implementation Plan (with budget line by 2013)	Water Technical Committee
Sol Is	Managing Honiara's water supply and reducing pollution	Diagnostic Report National Outlook	IWRM Plan under development	IWRM Implementation Plan under development	National Intersectoral Water Coordinating Committee
Vanuatu	Sustainable management of Sarakata Watershed	Diagnostic Report National Outlook	National Water Strategy	Costed NWS Implementation Strategy under development	National Water Resources Advisory Committee
Fiji	Integrated Flood Risk Management in the Nadi River Basin	Diagnostic Report	Draft National Watsan Policy, Rural Watsan Policy	Fiji has a strong Nadi Watershed coord framework	National Water committee (established, low activity)"

IWRM	Watershed Management
Demo	Water Resource Assessment & Protection
Project	Wastewater management & Sanitation
Theme	Water Use Efficiency & Water Safety

The GEF-UNDP-UNEP **Implementing Sustainable Integrated Water Resources and Wastewater Management (PacIWRM)** project on which the R2R program draws upon was formulated to address sustainable water management in PICs. The Pacific IWRM project has supported improvements in natural resources and environmental management, reflecting country priorities to address water and land development issues in the PICs, while also delivering significant global environmental benefits. The demonstrations have been a driver for water governance reform with all participating PICs having established and operating Inter-ministerial Water Committees and most having developed national water policies, which have either been endorsed by Government or are in the process of being endorsed. Likewise national

diagnostic reports for Water, Sanitation and Climate have been completed or are underway in the participating PICs. Plans of action in the form of IWRM Plans are also well underway and will be completed for participating PICs by the end of 2013. The sub-projects under this program will support and build on the implementation of these strategies.

### **C. Rationale of the program and description of strategic approach (including description of current barriers to achieve the stated objectives):**

**The Pacific Context.**<sup>2</sup> The recently completed United National Development Assistance Framework (UNDAF) for the Pacific Region (2013-2017) provides the context for the R2R program. It recognized that the general challenge for the Pacific Island Countries (PICs) is to ensure the sustainable management of their terrestrial and marine natural resources and heritage, from the regional to the local level, and the adaptation of individuals, communities and states to climate and environmental change and natural hazards, as well as to be well prepared to respond to natural disaster events and population related consequences.

The PICs represent microcosms of some of the most significant development and environment challenges the world faces. They vary considerably in their size and geomorphology with over 6,000 islands and islets ranging from high volcanic islands to tiny low coral atolls and have correspondingly varied economies and systems of governance. Some PICs consist of a few relatively sparsely inhabited islands while others have much more densely populated island groups. With their limited land area, PICs experience intense competing pressures on land resources for agriculture, tourism, transport, water, and other needs. Available water resources in most PICs are quite limited, often only to thin layers of groundwater lying above more saline waters, and water storage capacities and infrastructure are insufficient, and poorly treated wastewater releases or overuse of fertilizer in upstream communities/farms can pollute coastal waters, create disease outbreaks, and contaminate sensitive groundwater supplies. To say the island states are highly vulnerable to storm overwash, drought, and flood is an understatement - especially those with little freshwater that rely on rainfall harvesting. With increasing stress from extreme climatic events, this vulnerability, and a range of geographic settings, there is a need for a variety of different governance and resource management strategies and approaches focusing on different scales, and different levels of capacity.

Despite these differences, the Pacific island states do share some common environmental features. Many are small, low-lying and isolated, which makes them vulnerable to climatic influences such as storms, drought and sea-level rise. Yet many of these same islands are globally significant with regards to biodiversity. Flora and fauna of small isolated islands exhibit high endemism and are therefore of global biodiversity significance. These fragile island ecosystems are increasingly exposed to external and internal anthropogenic impacts threatening endemic terrestrial, coastal and marine biodiversity. Some PICs have high population growth rates with some islands such as Ebeye in the Marshall Islands and Tarawa in Kiribati having population densities greater than many large cities such as Kuala Lumpur and Paris. PICs are becoming increasingly urbanized with increased pressures on the environment. Special stress is experienced at the coast, where most people dwell and earn a living. Hence, pollutants and other environmental degradation are concentrated along the coastal strip, the estuarine environment and inshore marine areas.

Forested lands are coming under intense pressure for fuel wood, timber and pulp for export, conversion to agricultural uses, and for tourism infrastructure with little regard for their potential as carbon storehouses and other ecosystem services. In places, subsistence agriculture has given way to sugar cane, oil palm and other cash crops with resulting soil erosion that devastates soil fertility, carbon sequestration opportunities, and water holding capacity of the farm land. The downstream impacts can be devastating in these steep basins with flood waters being generated from denuded lands contributing to property damage and loss of life. The PICs are important centers of globally significant marine and terrestrial biodiversity and this biodiversity is often threatened by land conversion, urban encroachment, pollution, invasive species, overexploitation (freshwater, fisheries, forest products, etc.), unsustainable agricultural practices, habitat loss or conversion for tourism, and climate change - with resulting loss of 'ecosystem services' at the global, national and

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<sup>2</sup> This section draws heavily from the UNDAF for Pacific Region for 2013-2017. The UNDAF covers 13 PICs and one Territory (Tokelau) but for the purposes of the PFD, reference is only made for the 13 PICs that are GEF-eligible. It is noted that the situation described also applies to PNG.

local scales. This is especially true for the mangroves; the 'blue forests' that sequester carbon and provide a myriad of ecosystem goods and services for communities but are increasingly being filled, drained, and converted for development and vacation properties. The PICs and other low lying island nations face a difficult future with the current 'business as usual' climate change scenario, as sea level rise, salt intrusion, and more powerful storms now threaten the inhabitability and survival of many of these islands.

Climate change, ocean acidification and natural and man-made hazards increasingly impact the livelihoods, security and well-being of the peoples of the Pacific; these can be exacerbated through inappropriate natural resources management. Whilst the scale and impact of disaster events in PICs is often not significant enough to feature at the global level and in international disaster databases, they are substantial relative to the region's economic, social and environmental context with losses often in the realm of 25% – 100% of GDP. Initial research indicates that PICs are more prone to extensive risk (relatively small but frequent events affecting poverty and livelihoods, like landslides, flash flood, coastal surges, water scarcity) rather than intensive risk (infrequent events of catastrophic scale, such as cyclones, earthquakes and tsunamis that can overwhelm national response systems and may at times require international assistance). Extensive risks may go under-reported due to capacity constraints thus masking an increasing burden of risk to low income households and communities. At the sub-national level, these types of risk may be increasing most rapidly in small and medium sized urban centers with weaker capacities to manage urban growth; in areas where deforestation and destruction of coastal ecosystems are magnifying the risk.

The region is highly vulnerable to general climatic factors such as the El Niño and La Nina cycles and climate variability. Climatic change is impacting biological diversity, agriculture, and water availability including sea level rise to low-lying islands and coastal zones. Groundwater is an extremely important water resource in the Pacific region, although volumes are limited in comparison to 'mainland' regions. Aquifers generally are vulnerable to saline intrusion owing to sea level rise and over-pumping, while some are just floating lenses of freshwater overlying the salty groundwater and are in need of special attention. The region is subject to disasters caused by storm events, climatic disasters and experiences drought from time to time. Cyclone damage, floods, droughts, tsunami and storm surges have been sufficiently severe for declaration of state of emergencies and requests for major international assistance. The worsening of extreme climatic events over the years is another driving force that reinforces the need for a targeted approach to water, land, forest and coastal management from country to country within the Pacific region.

Climate change and disaster risks threaten livelihoods in the Pacific islands region - whether based on agriculture, fisheries, forestry, tourism or trade. It is likely that climate change and the expected increase in the frequency and intensity of weather-related events (combined with changing rainfall patterns, increased temperatures and coastal erosion) will challenge already weak patterns of food security in the Pacific region in many ways over the next few decades which will marginalize and push more people below the poverty line. Available scenario modeling indicates that current levels of global economic activity and associated greenhouse gas emissions will cause a temperature rise of greater than 1.5 degrees Celsius, which will not only affect coral reefs and other ecosystems and undermine sources of livelihood for Pacific peoples, but will also threaten the very existence of some of the Pacific countries. In some cases, local populations living on atolls may need to relocate due to the impacts of climate change and expected sea-level rise.

The PICs have been highlighting the strong nexus between climate change and disaster risks. To this nexus, the status of natural resources upon which PICs are most dependent could also affect disaster risks. Compelling evidence shows that one of the effects of climate change is increasing disaster risk. It can also be argued that the deterioration of natural resources could exacerbate the impacts of climate change. These place additional burdens on already stretched humanitarian and development systems in the Pacific. PICs recognize the need to integrate disaster risk management (DRM), climate change policies and natural resource management strategies to increase the resilience of societies and communities to hazards by reducing risk and improving the ability to better anticipate, resist and recover from the impacts of disasters. The underlying causes of climate and disaster risk in PICs are not only linked to exogenous factors, but determined to a large extent by home grown development decisions on public investments and land-use planning. It also includes similar traditional development instruments such as public investment planning and social protection which need to be used in innovative ways to address existing vulnerabilities and upscale disaster risk management efforts.

The lack of disaggregated data on issues relating to climate change and disaster risk management undermines the ability to address the impact on especially the poor, women, youth, and children and provide channels for their participation in



the adaptation and risk reduction process. Capacities are needed to equip key development sectors to better prepare for the harmful consequences of climate change and disasters and to manage the associated risks. These include the ability to incorporate climate and natural hazard information into the decision-making of urban and rural communities.

**Strategic Approach.** The R2R program supports introduction of integrated approaches to management of natural resources at the coasts as well as adjacent catchments through demonstration pilots, capacity building, and adoption and implementation of national and local policies, reforms, and budget commitments through national projects and one regional project. The concept of R2R management of ecosystems describes a comprehensive approach to managing activities of multiple sectors within a complete ‘catchment’ or ‘watershed’, from the ridge top down through to the ocean to ensure natural resource sustainability, biodiversity conservation, risk reduction and livelihood generation. For atolls and low islands, the entire island would be considered for this comprehensive integrated approach. While the terms ICM and IWRM may be new to some, the concepts of holistic management have been practiced throughout islands in the Pacific for many years and needs to be adjusted to the new economies, populations, and climatic realities. A more detailed description of the R2R conceptual framework and why it is the appropriate solution to the special situation being faced by island states everywhere is found in **Annex D**.

The ability of SIDS to manage their resources and ecosystems in a sustainable manner while sustaining their livelihoods is crucial to their social and economic well-being, and is clearly directly related to GEF’s mandate for protection and sustainable management of biodiversity and international waters. The PICs also have specific needs and requirements when developing their economies. These are related to small population sizes and human resource limitations, small GDPs, limited land area and limited natural resources. Competing land pressures, the choice of whether to use precious and scarce land for agriculture, water reserves, a school or recreation area, are appreciated at the household, village and wider community level. In particular, every coastal village community understands the connection between activities on the land and in the sea, as they impact on freshwater, coastal interface, lagoons and coral reefs. The small size of the catchments, shallow aquifers and lack of natural storage affects all water and coastal resource users from urban and rural water supplies, commercial forestry, subsistence agriculture, and the fisheries/reefs and tourist developments.

The principal barriers to date that have confounded introduction of integrated land, water, forest and coastal management and the scaling up application of a ‘R2R’ approach in the PICs where utilized in scattered demonstration projects include:

1. Fragmented, single sector development efforts (including donor funded) across different landscapes and government levels that do not include needed spatial management techniques due to unclear institutional responsibilities, weak policies, communication & coordination;
2. Limited knowledge and application of ICM and IWRM, SLM and SFM practices and tools in the Pacific Islands;
3. Limited human and institutional capacity for ICM in the PICs with much capacity lost to emigration;
4. Limited experience and capacity in linking sustainable land management in watersheds through IWRM with the livelihood needs of downstream coastal residents and ecosystems through ICM;
5. Limited PICs knowledge and national/local capacity on SLM, IWRM and ICM as well as carbon sequestration opportunities;
6. Insufficient involvement of key civil society and other stakeholders spanning the ‘ridge’ to the ‘reef’;
7. Rising development pressures on a small taxation base, and environment and natural resource management provided with inadequate resources
8. Weak governance structures and lack of government/donor interest in supporting integrated approaches across sectors, which are more difficult to achieve; and
9. Insufficient political and public awareness of the role water, land, and biological diversity play in economic development, public health and environmental protection.

The strategy for the program is built on addressing, and where achievable, overcoming the barriers listed above. The GEF STAR focal areas - Biodiversity, Land Degradation, Climate Change Mitigation - as well as Climate Change Adaptation, International Waters and SFM, provide a series of entry points for piloting the needed R2R approaches in the Pacific Islands to test their technical, operational and political viability (Figure 1). These measures that are aimed at removing barriers include: advancing IWRM in watershed management; promoting ICM and linking it with IWRM; introducing

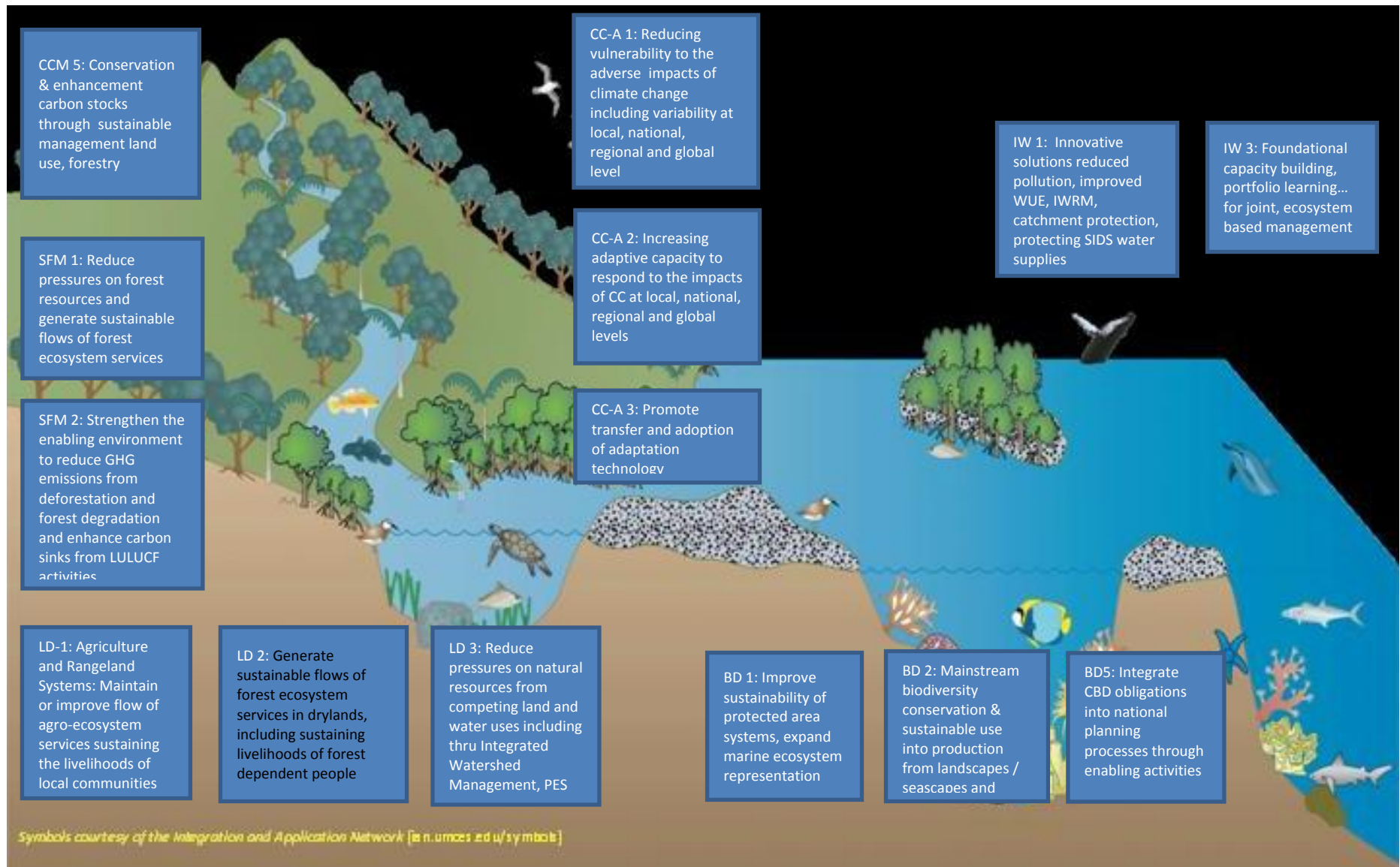
sustainable land and forest management policies and practices; payments for ecosystem services (PES); expanding terrestrial and marine protected areas (including through combinations of linked watersheds and coastal ecosystems); and incorporating these approaches into climate change adaptation measures to reduce vulnerability and improve resilience. A focus on local capacity and expertise development along with knowledge tools and simplified indicator reporting to the GEF agencies in the complementary regional project makes this effort different from those preceding it and enables a better chance for success and sustainability. In sum, the proposed R2R multi-focal, multi-Trust Fund, multi-Agency Program encompasses an environmental management and cross sector economic paradigm that is ideally suited to the unique scale and climatic challenges of the PICs and is aimed to be sustained by a new generation of local expertise with the required capacity.

Annex D presents how these integrated R2R approaches can be a positive force in overcoming the barriers. The fact remains that lack of capacity, knowledge, and awareness still impede institutional reforms in some countries. This program provides the opportunity for governments to make these needed changes. For example, resolving land tenure issues and balancing traditional customary rights to land with those of the ‘public interest’ is a recurrent theme that lies at the heart of many attempts to improve both urban management and land planning generally throughout the Pacific. This includes the planning and protection of water resources including water catchments and groundwater lenses and this program provides an opportunity for governments and communities to work together to find integrated solutions to improve the quality of life. The failure to deal directly with land tenure and traditional organizations has hindered service development and becomes an excuse in its own right to deliver improved services. Dealing with land and its underlying socio-cultural norms and values are an integral part of dealing with water, land and coastal management in PICs, and land degradation focal area funding along with the other focal areas will provide the capacity building, training, exchanges of experience, and network building among local leaders to make the needed changes. Likewise in the forest products, agriculture, and mining sectors, the exploitation of natural resources has not always been well governed, particularly in cases where external interests have dominated. Tourism is an extremely important and evolving contributor to many economies in the region, with the balance between tourism development and environmental sensitivity increasingly difficult to maintain. Tourism is a significant consumer of water, land and coastal resources and often a major driver of conversion of coastal blue forests that may be valuable for carbon finance in the future for trapping carbon. For example Fiji’s annual visitor number is approaching 1 million, and complex stresses involving land, water, and coastal ecosystem conversion make the development vulnerable to climatic extremes.

The program represents an important opportunity to test whether some or all of the 14 PICs can operationalize these integrated approaches for sustaining their island communities in the face of increasingly extreme climatic variability and population and development pressures. The programme and component projects also provide the occasion for governments to commit to adopting national policies, legislation, programs and budget reforms to “mainstream” and sustain R2R approaches into national development policies and plans. As Pacific Island officials witness the successes that pilot communities have in applying the “Ridge to Reef” paradigm, the dynamic known as ‘from community to cabinet’ that was developed in the previous regional GEF IW project will come into play. Adoption and implementation of the policy and institutional reforms and budget measures will represent a signal that several key barriers have been removed and full scale implementation and scaling up should be a next priority for GEF 6.

The Pacific Island states truly represent microcosms where the ‘basin-wide’, integrated (R2R) approach becomes even more relevant and necessary to achieve sustainability in these fragile island ecosystems. It should not be hard for a Pacific Islander to understand the very close linkage between land, water and forest management in a given island watershed and the sustainability of ecosystems and livelihoods in the downstream (or for low-lying islands the adjacent) coastal waters. Global commitments to action such as the Mauritius Strategy for Implementation, the GEF 5 Strategy, and the outcome of Rio + 20 reflect the need for integrated approaches across sectors for small islands and coasts. This program represents the PICs response to move forward and address the barriers that stand in the way of practical application of these integrated approaches that are challenging to undertake. By pooling GEF and other Trust Fund (SCCF) resources in a program across focal areas, different ministries will be able to work together with their development partners and local communities in priority landscapes to: a) test approaches for working across GEF focal areas and sectors in pilot geographic areas; and b) learn by doing with capacity development, knowledge sharing, and adopting ICM, SLM, SFM and IWRM friendly national and local policies and actions to complement approaches for conserving biological diversity during times of climatic fluctuation.

**Figure 1.** Pacific Islands Ridge-to-Reef (R2R) National Priorities and GEF Focal Area Strategic Objectives



#### **D. Discuss the added value of the program vis-à-vis a project approach (including [cost effectiveness](#)):**

There are a number of advantages to applying a program vs. project approach in the Pacific Islands R2R initiative, including:

1. Assisting the PICs to strategically accelerate programming of their STAR resources, the large majority of which remained unallocated in GEF-5 as of December 2012;
2. Given the lack capacity for ICM practices/tools and the R2R concept in the Pacific, this presents a significant opportunity to share experience, best practice and knowledge across PICs through the program;
3. The opportunity to build a broad consensus and stakeholder base across the Pacific Islands of the relevance and appropriateness of R2R as a paradigm not only for integrated environmental catchment/island management, but also for long-term catchment/island environmental and economic sustainability and global application;
4. The significant flexibility in allocating GEF STAR, SCCF/LDCCF, and IW resources designed in the program provides parallel flexibility in the mobilization of program co-financing resources, both cash and in-kind, towards maximization of total program co-finance; and
5. Cost effectiveness is achieved by devoting the PIC's STAR resources to priority national demonstration pilots driven by the PICs and policy development vis-à-vis regional coordination, knowledge management, and capacity included in complementary regional International Waters project; cost effectiveness is also achieved by reducing future damage and costs from floods, droughts, and storms through ICM and IWRM policies and measures rather than treat the symptoms after disasters occur.

The multi-focal area, multi-trust fund and multi-agency nature of the R2R program provides an opportunity for testing cross focal area synergies, leveraging relevant existing and emerging agency programs, and interagency cooperation in vulnerable coastal areas for widespread application elsewhere. The program demonstrates a cost effective strategy in terms of reducing transactions costs of the linked projects compared to agencies conducting 11 separate projects. Cost savings and increased effectiveness accrue from joint meetings, regional supervision, integrated approaches as opposed to separate focal area projects, and sharing of experiences among countries that have previously demonstrated the ability to work together.

#### **E. Describe the baseline program and the problem that it seeks to address**

Pacific Island countries face a wide range of environmental and development challenges, ultimately driven by economic, demographic and cultural trends and the increasingly dominant driver of externally driven climate change. PICs are inherently highly vulnerable to natural hazards with narrow coastal areas and sometimes steep catchments which make many islands highly prone to floods, devastating infrastructure damage and loss of life from worsening storms and rising sea level. This is a most difficult baseline situation that needs much more attention than GEF can provide alone.

While the PICs have made some initial progress on applying integrated approaches to land and water management, to reducing freshwater and coastal pollution, and to maintaining key ecosystem services through creation of protected areas, payment for ecosystem services schemes and incentives for enhanced carbon storage, the fact remains that truly integrated approaches to environmental management in the PICs must ultimately encompass 'R2R' approaches that link the management of upstream PIC watersheds, land, forests and aquifers (through IWRM/SLM/SFM approaches) with the management of downstream or adjacent coastal areas (through ICM) to ensure community survival.

The R2R concept encapsulates Integrated Coastal Management (ICM), Integrated Water Resources Management (IWRM), Sustainable Land Management (SLM) and Sustainable Forest Management (SFM) along with GEF focal area specific interventions like MPAs and strengthened systems of protected areas to foster integrated considerations of multiple sectors within the selected area in order to sustain biodiversity, the natural resources they depend on, and

livelihoods. IWRM is focused on managing water use in catchment areas covering physical, social and economic aspects to ensure that upstream and downstream water use and treatment is balanced between human use and health, environmental sustainability, and economic development. This balanced approach is needed to minimize conflicts between communities and sectors as well as ensure sustainable use through the active involvement of stakeholders in the planning and management of water. ICM covers the downstream coastal aspect of managing human activities or island-wide for very small islands and atolls. ICM seeks to maintain existing ecosystem services, repair damaged systems to ensure their function of providing goods and services for both human and environmental benefits, and prevent further degradation through balanced and planned uses. The effective implementation of R2R approaches in Pacific Island Countries will require the development and delivery of practical training packages based on Pacific Island and other coastal and small catchment examples. There have been a number of successful demonstration projects of ICM and IWRM developed in the Pacific and elsewhere that can be adapted for use in training by Pacific islanders for subsequent delivery in the project to build local capacity for ICM and IWRM to sustain the linked coastal systems and catchments. SCCF funding will be sought when the trust fund is replenished to complement the regional project in reducing vulnerability of coastal ecosystems and communities and increasing their resilience to multiple climatic stresses as all GEF focal areas contribute to island community sustainability..

The baseline program upon which the GEF alternative builds consists of a mix of nationally and locally funded programs related to biodiversity, agriculture, forestry, fisheries, water management and parks in the business as usual scenario. These actions are mostly sector-based and usually not integrated in space or time. There are interventions funded by UNDP, UNEP, and FAO in the baseline through their programs as well as funding leveraged through donors that can be combined with GEF incremental costs to develop a more integrated program of interventions that is indicative of greater aspirations toward sustainability in the face of economic and population growth, increasing climatic fluctuations and sea level rise.

In the absence of introducing and mainstreaming such integrated approaches in this program and called for in global programs of action that have been endorsed by Heads of States, PICs risk: continued loss of biodiversity and the goods and services ecosystems produce, especially as MPAs, corals, and parks become damaged from sediment and pollution; increased illness from human waste and agricultural pollutants contaminating surface and groundwater supplies; accelerated deforestation to provide fuel, timber/pulp for export, and agricultural exports; reduced food security as catchments become further degraded/unproductive and fisheries protein reduced from sedimentation, pollution, and degradation of coral reefs; serious water shortages from wasteful use, unsustainable tourism, and lost water supplies from contamination and droughts; infrastructure and economic damage from building in coastal areas vulnerable to coastal flooding and storms; loss of life from flooding in vulnerable watersheds; increased diseases from contaminated water and shellfish, and storm damage; and serious unrest in local communities as ecosystem degradation accelerates, human health worsens, storms devastate infrastructure and increase fatalities, drought forces migration, and livelihoods are greatly reduced.

### Baseline Programs by Pacific Island Country<sup>3</sup>

The various programs and projects undertaken by the participating PICs, both funded by internal resources as well as external resources from various bilateral and multilateral donors, will serve as a baseline for the R2R program. There are also projects of NGOs that are relevant to the program. Most of the government-implemented projects are undertaken sectorally under the departments of Agriculture, Forestry, Fisheries and/or Environment.

### **Cook Islands (UNDP-supported project)**

The current baseline by the national government into environmental management related actions totals at least \$2 million annually. This includes government investment through the National Environmental Service at approximately \$835,000 for various activities, including mainstreaming environmental concerns into national and sector policies and planning processes, enhancing the management and use of biodiversity and natural resources, providing advice on environment sustainability and promoting and enhancing community participation and actions to

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<sup>3</sup> Further discussion is found in Annex B on sub-project concepts.

help protect the environment. Additionally, the Ministry of Marine Resources invests US\$ 1,040,000 annually on monitoring and control of illegal practices in its marine areas, on the implementation of the Cook Islands Lagoon Monitoring Programme (which includes water quality monitoring in Rarotonga, Aitutaki and Manihiki) and on an education and public awareness program on marine issues. Furthermore, the Ministry of Agriculture invests around US\$ 250,000 annually on biosecurity related activities, such as strengthening internal bio-security controls to prevent the introduction of alien invasive species in the country (through periodic training and capacity building); and promoting 'Biological Soil School Program' aimed at implementing eco-friendly methods of soil/water management.

Protected areas establishment has been a key mechanism in the Cook Islands' efforts to conserve biodiversity of global significance. The Suwarrow National Park is the only protected area that is directly managed by the government (Environmental Services), and a new protected area covering the globally important cloud forests of Rarotonga is under government consideration. Most of the existing protected areas are community conservation areas (called *Ra'ui*) that are primarily governed under traditional protection regimes, which will overlap with existing protected areas. Many community conservation areas exist that have been mostly designated as seasonally closed under the *Ra'ui* system governed by traditional rules. At the same time, the Prime Minister announced in August 2012 the contribution of Cook Islands to the Pacific Oceanscape of 1.1 million km<sup>2</sup> to create the world's largest marine park. This area will be zoned for multiple uses including tourism, fishing and other extractive industries that may be done sustainably.

Despite existing investments and activities, under the business-as-usual scenario: 1) PAs will remain poorly managed and under-funded; and 2) biodiversity conservation in protected areas will continue to be impacted by unsustainable sectoral practices, particularly by agriculture and tourism. The long-term solution is, therefore, to implement a Ridge-to-Reef approach that combines a functional, representative and sustainable national system of terrestrial, coastal and marine protected areas that are complemented by appropriate sector practices in adjoining / upstream watersheds to mitigate threats to conservation from outside protected areas. The project will support the implementation of two components to safeguard Cook Island's biodiversity and ecosystem services for global benefits. The first component will strengthen the national system of protected areas, and under the second component, the project will ensure that threats to protected areas from outside the protected areas, emanating from key economic sectors (agriculture and tourism) are effectively mitigated, and that they actually provide effective incentives for local households and communities to support environmentally friendly agricultural practices and environmentally friendly tourism management.

### **Fiji (UNDP-supported project)**

Several institutions oversee environmental management activities in Fiji, including the Departments of Environment, Agriculture, Forestry, Fisheries and the Ministry of Foreign Affairs for climate change. The Department of Environment is responsible for fulfilling Fiji's obligations related to regional and multilateral environmental agreements, environmental protection legislation, environmental awareness, education and dissemination, and coastal zone management - and for coordinating these issues across Ministries. Through donor funding, the Department of Environment has implemented various environment programmes throughout Fiji related to biodiversity conservation, sustainable biological resource use, climate change, waste and pollution, development control and other programmes related to Fiji's obligations under regional and multilateral agreements. Within the Ministry of Agriculture, the Land Use Division plays a key role in agricultural land use and planning while drainage is the responsibility of the Drainage Board. The Ministry of Works, manages physical infrastructure development, including the national road network and telecommunications, as National Water and Sewage. Many environmental NGOs, including WWF, IUCN, WCS, CI, Birdlife/Mareqeti Viti, and others, also play a vital role in implementing various environmental projects/programme.

Outside of protected areas, the Government of Fiji is carrying out efforts towards re-vegetation of forested areas through various conservation community-based initiatives with a lot of support from the Forestry and Agriculture departments. Nurseries set up in various villages and communities are for the purpose of reforestation and afforestation. Reforestation includes restocking of logged indigenous hardwood forests with hardwood tree species (exotic and indigenous species) while afforestation involves the establishment of forest plantations in land areas which previously carried no tree cover such as grasslands. There are also ongoing initiatives for planting of pineapples on steeply sloping lands to reduce soil erosion and sediments deposited into the receiving waters, while at the same time promoting sustainable livelihoods.

Despite these initiatives, the existing PAs remain under-funded and only minimally managed for the foreseeable future especially in the native owned lands where landowners are eager to harvest forest products for livelihoods. Some of these forested areas are also coming under threat to mining activities, particularly in the Sovi Basin (part of the Waidina Catchment) which may be adversely affected once the copper mining license is granted to the mining company currently carrying out exploration in the adjacent areas.

As a result, the baseline for this proposed project can best be characterized by the lack of proper integrated environmental management with coordinated efforts across all the key stakeholders that comprise both terrestrial and coastal and marine interests. The lack of environmental management in key sectors may be jeopardizing successes from other efforts up and downstream, including terrestrial and marine protected areas. Utilizing an integrated true R2R approach, the wealth of natural resources and associated ecosystem services available to Fiji will not only improve the health of the island environments, but will also improve the national economy, local livelihoods, and generate global environmental benefits.

The total co-financing for the Fiji national R2R proposal is estimated at about \$30 million, mostly coming from government sources and from NGOs and academic organizations such as the University of South Pacific - Institute of Applied Science (\$2.55 million), Birdlife (\$517,000), WWF (\$200,000), WCS (\$215,000), among others.

Building on the baseline, the project will conserve marine and terrestrial biodiversity in 5 to 6 priority areas identified through national consultations and from the national strategies. It will reduce pressures on natural resources from competing land-uses through integrated approaches in the same watersheds. It will also conserve, restore and enhance carbon stocks through sustainable forestry through SFM/REDD+. The range of activities will be concentrated within the priority watersheds thereby demonstrating the ridge-to-reef approach.

#### **Kiribati (FAO-supported project)**

Safeguarding and sustainable use of key biodiversity areas and integrated ecosystem and natural resources management requires a variety of governance approaches, including protected areas, community-based conservation areas (CCAs) and co-managed sites. The project will build on a number of initiatives, such as the Kiribati Integrated Environment Policy, Kiribati Urban Development Programme, Phoenix Island Protected Area Endowment Trust Fund, and the Critical Ecosystem Partnership Fund invasive alien species projects which are being implemented in the Kintimati Island.

Four priority outcomes guide current FAO support to Kiribati. These include: (i) strengthened policy, legal and regulatory frameworks for sustainable agriculture and fisheries development; (ii) increased production, productivity and resilience of crop and livestock systems suitable for atoll conditions; (iii) a strengthened and diversified copra industry, and (iv) sustainably developed aquaculture, inshore fisheries and value added products. Support to outcome 1 has focused on strengthening data and capacity for policy analysis and planning through assistance to strengthen capacity to analyze market data. This work helped demonstrate the importance of developing and maintaining systems of domestic market data collection and use, and also the value of good data for improved decision making. Going forward, the constraint of the absence of good agriculture data collection, systematization and analysis in Kiribati to improve planning and monitoring for food security has been identified as a priority. Other support to strategic planning came from a review of aquaculture/mariculture which identified lessons learned and made recommendations on future developments. Support has also been provided for training of a key fisheries policy staff. Ongoing training support has also been provided in the area of food safety and Codex capacity building.

Under outcome 3, ongoing assistance is being provided for sustainable development of senile coconut palms. This support is promoting coconut timber milling by building Kiribati's capacity in a range of technical and policy areas. Through creating an enabling environment the aim is that local I-Kiribati will ultimately be encouraged to invest in small scale coconut timber milling, in a market environment wherein coconut timber is well accepted and in high demand as a quality substitute for home construction. Support for coconut sector development will remain a priority. The national Kiribati project will also complement several GEF initiatives, including the Programme of Work on Protected Areas, the Kiribati Adaptation Project, particularly the mangroves component. It will also address priorities identified under the National Biodiversity Strategy and Action Plan (NBSAP) which currently being updated.

GEF resources will build on these initiatives and promote an integrated approach with regards to land-use, water, coastal and marine management, in order to enhance their ecosystem services and conserve biodiversity of global significance. It will also be used to complement the policy and regulatory work and mainstream integrated ecosystem management into development plans and policies.

#### **Nauru (UNDP-supported project)**

The project will build on initiatives by the Government of Nauru and projects supported by bilateral organizations in support of the management of the environment and natural resources throughout the country. The Environment Division within MCIE will spend an estimated US\$500,000 from 2014-2018 in coordinating environmental policy, laws and programs. Funding from communities that are beneficiaries of the project through community-based interventions in marine biodiversity conservation and land management is estimated at US\$125,000. These will be in the form of in-kind contribution through provision of local materials and labor for the proposed project activities. In addition, bilateral donors are providing funding to Nauru throughout the project lifetime. The initiatives of bilateral organizations which are primarily aimed at social and economic development provide the platform for GEF funds to achieve global environmental benefits. The European Union is extending US\$500,000 for improving Nauru's water catchment systems while AusAID is providing US\$1,000,000 for improving water storage capacity in selected sites. The Government of Japan is providing US\$4,000,000 for promoting the desalination of seawater for productive uses beyond supplying household water consumption.

Land degradation, which occurs in 70% of 'Topside' (the raised central plateau), is being addressed by the NRC through projects involving reforestation with indigenous species as well as the testing of suitable species for beautification and food crops. An initial site, known as Pit 6, has several test plots of tree species. A new undertaking for rehabilitation is being performed on a one hectare plot with a more accelerated timeline and a more directed, less experimental approach. The majority of people who live in 'Bottom-side' are very poor and need access to clean water, healthy food and secure, affordable housing. Short-term goals for addressing these needs can be developed and addressed with suitable projects that will build human capacity and increase the physical and mental wellbeing of the population. When the land from Topside eventually becomes available as living space, knowledge gained and community resilience developed can be directed to SLM and land development on the rehabilitated areas.

Despite these initiatives, the business-as-usual scenario for marine biodiversity and land management in Nauru is one where: i) existing initiatives remain under-funded and only minimally managed for the foreseeable future; ii) areas important to represent biodiversity will remain unprotected, and Nauru will remain far short of its national goals for coverage of conservation areas; and iii) management of critical ecosystems in terrestrial and marine areas will continue on an ad-hoc basis with little consideration of downstream impacts on sustainable livelihood opportunities.

The long-term solution is to implement a ridge-to-reef approach that combines a functional, representative and sustainable national system of coastal and marine managed areas integrated with the adoption of appropriate SLM practices in adjoining / upstream watersheds. This will effectively reduce land degradation and enhance protection for marine and coastal biodiversity and habitats through the establishment of locally managed marine areas (LMMA) around the island. The process involved will include, but not limited to, the following: engaging policy makers and community leaders; identifying the priority pollutants particularly those that pollute coastal ecosystems and coral reefs; identifying effective land management practices which will work to reduce pollution; managing domestic and industrial water effluents; setting targets for pollutant discharge reductions into coastal waters; and monitoring and assessment at the scale of ridge-to-reef. The LMMA approach will comprise: i) conceptualizing the marine managed area where authorities for boundary-making, existing boundaries and jurisdiction will be determined, agencies and stakeholders engaged, and boundary model developed; ii) describing the marine boundary that will involve writing the boundary description, and working with mapping professionals; and iii) digitizing of the boundary that involves finding the best available data for digital boundary development, creating and documenting the digital boundary, and providing digital boundary information to the public.

#### **Palau (UNEP-supported project)**

The baseline for the national R2R project in Palau consists primarily of activities undertaken by the government and by



NGOs that include the following: Protected Area Network (PAN) Fund (\$4.8 million); Palau Community College - Cooperative Research Extension (\$1.95 million); Bureau of Agriculture (Government of Palau) (\$1.5 million); Public Lands Authority (\$0.5 million); Palau International Coral Reef Center (\$4 million); and local and international NGOs such as The Nature Conservancy and Micronesia Conservation Trust (\$2.6 million).

The project will build the internal capacity of Palau to manage the full range of the PAN and many areas not captured by the PAN (areas targeted for sustainable land and forest management). Presently the PANs have been identified and they are enshrined by legislation and policies. However many of the planned activities in the PANs have not commenced. This project will over the next four years on management of natural areas which are currently paper parks and using the improved systems being developed by the current project for existing Protected Area Networks as models. This will include the preparation of management plans and support networks which will be eligible for future funding under the Micronesia Challenge Fund. This capacity will also be extended to include areas beyond PANs. Because the PAN involves predominantly near-shore marine areas and their immediate catchments, this sustainable land management component will enlarge the terrestrial component of managed terrestrial habitat so that sustainable use practices are established while protecting ecosystem services.

Palau provides one of the few relatively unspoiled archipelagos in the world, especially in the tropics, with their physical geographic nature intact. The project will contribute to the ridge-to-reef programme through an integrated approach with regards to land-use management, forest management and water and coastal management, in order to enhance their ecosystem services.

#### **Papua New Guinea (UNDP-supported project)**

PNG's protected area system is comprised of two types of PA – (1) National Parks and Wildlife Sanctuaries gazetted on freehold land and managed by the State, and (2) Wildlife Management Areas, managed by local communities, on communal land, which have as a specific objective beyond safeguarding biodiversity the sustainable utilisation of its components. The Government is moving to strengthen its capacities to manage the environment, with plans to set up a Conservation and Environmental Protection Authority (CEPA). This will strengthen the capacity of Government to licence and regulate development and improve capacities to manage biodiversity *in situ*, including within PAs.

The project will strengthen the operational capacity of government to manage the PA system. This will entail the creation of a PA management unit within DEC/CEPA, with adequate staffing and funding to plan, monitor and report on conservation in PAs, and installation of effective and accountable systems to manage staff and finances. In addition, the project will provide support for the development of a decision support system, to effectively deploy staff and funds to address threats to biodiversity at the site level; the development of capabilities to engage the private sector in PA management—developing public-private partnerships, in particular with extractive industries to secure funds and management advice and capacity for PAs, training staff—to provide the full range of PA management functions mandated of DEC/CEPA, and strengthening budgetary negotiation capacities. A major emphasis will be placed on ensuring cost effectiveness; options for improving the delivery of PA management on-the-ground will be evaluated and operationalised, including the deployment of community rangers, and development of co management systems with communities and local government in National Parks and Wildlife Sanctuaries. The management system will establish standards and guidelines governing PA management functions. Measures to improve the accountability of DEC/CEPA management for decision making and operations will be introduced. These could include the development of a biennial state of PA systems report, assessing progress in implementing the National PA Systems Policy and compliance with the standards and guidelines for PA management.

The enforcement capabilities of DEC/CEPA to address threats within National Parks and Sanctuaries will be strengthened at site level, and in the landscapes in which PAs are located through the deployment of staff (including community rangers) in the field. Resources will be secured both through new budget allocations, and by reconfiguring the use of existing funds. The project will assist CEPA to put in place and implement protocols for intelligence gathering, patrolling, booking offences, prosecuting offences and reporting at the site level. This will necessarily rely on a solid intelligence gathering system within local communities in PA adjacent landscapes. Funds will be allocated (from GEF resources and government co finance) for the rehabilitation of PA infrastructure and equipment—based on a site by site needs assessment to be undertaken during further project preparation. This will include funding, as needed

for boundary demarcation, ranger housing, visitor interpretation and other amenities.

With respect to Wildlife Management Areas, the capacity of community Wildlife Management Committees to plan, oversee and manage the WMA landscape will be improved—to ensure that they are effectively implementing agreed management plans. Interventions will strengthen community institutions – so that they are able to plan and manage conservation, and resolve conflicts over the use of resources between groups—with mediation as needed through DEC/CEPA. A major focus will be placed on engendering the sustainable use of wild resources both for subsistence and artisanal purposes – strengthening community based natural resource management. This will include, support for population surveys, to ensure sustainable offtakes, strengthening traditional management systems (i.e no take, rotational use), monitoring the impacts of use and improving enforcement and monitoring of management. This will focus on non timber forest products (such as *galip* nuts) and wildlife—such as crocodile ranching, where sustainability can be assured with effective conservation management and where there are existing markets that can be harnessed. The development of supply chains for produce will be important to provide a utilitarian incentive for conservation.

Interventions will focus on 5-6 sites (details to be determined during preparation of the PIF<sup>4</sup>), selected based on the global significance of the areas, receptivity of landowners and social feasibility of conservation, and contribution of towards the effective management of large landscapes—to secure biodiversity and functional connectivity. Where possible, PNG will make use of regional training opportunities to strengthen staff capacities, undertaken under the auspices of the Pacific Ridge to Reef Programme, thus optimising the use of scarce conservation funds. Interventions will be nested within landscape initiatives aimed at managing forest use (i.e. REDD readiness).

#### **Republic of Marshall Islands (UNEP-supported project)**

The primary source of fresh water is rain, mostly through rainwater catchment and in some favorable locations with groundwater lenses. In Majuro the water system is more than 75% rainwater collection (both municipal and household) with the remainder coming from Laura groundwater lens. In Ebeye, the water supply system is based solely on desalination through expensive reverse osmosis filters. By 2006 approximately of 60% outer island water catchments were still unsafe and contaminated. (EPA 2006) *Component 1* of the project aims to enhance water safety supply and sanitation, making use of existing networks such as the Majuro Water & Sewer Company (MWSC). This part of the project is building on other initiatives such as Coping with Climate Change in the Pacific Islands Region (CCCPiR) and Pacific Adaptation to Climate Change (PACC). Since the sanitation component has been missing from most national and local planning policies, the first goal is to plan out how to provide and implement water, sanitation and Integrated Water Resources Management (IWRM) on the 24 inhabited atolls.

The RMI highly depends on foreign assistance and food imports, combined with limited economic activities in fisheries and agriculture. Agriculture is dominated by copra production, which also constitutes the only exported agriculture commodity. There are no other agricultural crops marketed at any significant scale. Most products are for subsistence only. Traditional local food crops such as breadfruit and *pandanus* are only very occasional ingredients in the local diet, even in rural areas on the outer islands. Today, with considerable overpopulation in Majuro, approximately 80-90% of all food calories are supplied by imported foods. In most of the outer islands, indigenous foods supply 50% to 75% of food calories. *Component 2* aims to enhance food security on the atolls, through enhanced food production. More salt tolerant crop varieties are also urgently needed, for breadfruit, taro and other vegetable and fruit varieties. Cultivars and scientific and traditional knowledge need to be exchanged and demonstrated regionally among Micronesian, atoll and other nations, governments and communities facing similar sea level rise adaptation and survival challenges. Additionally, health implications such as diabetes, is common, largely due to the overconsumption of imported sugar and starch. The project aims to resurrect the traditional diet and cultivation practices, such as agro-forestry. This will generate livelihood benefits and greater resilience.

The low lying atolls of the Marshall Islands at 1 to 2 meters above high tide are among the most vulnerable nations in the world to the short and long term catastrophic impacts of sea level rise and climate change. Global sea levels are predicted to rise by a meter or more over the coming century, currently climbing locally at the 20 year global average rate of 3mm per year (includes reference to 60 year tide data sets at both Kwajalein and Majuro). Threats include

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<sup>4</sup> Tentatively—Bensbach WMA, Baiyer River Wildlife Sanctuary, Sepik Wetlands WMA, Variarata NP and Managalas WMA.

increased risk from storm surge flooding in the short to medium term, accelerated coastal erosion and loss of atoll habitability, with complete inundation expected in the long term. Severe coastal erosion and movement of beaches inland are already occurring on all atolls. *Component 3* aims to enhance coastal management and atoll management, in order to secure the natural and human assets. As a result of loss of traditional knowledge and practices, the coastal areas of the RMI have experienced overexploitation of reef and lagoon resources. The project aims start the ball rolling to protect 30% of the reefs and 20% of the coastal forests on five atolls. This will be achieved through the generation of protected areas and PANs, supported by a community plan, local ordinances, national legislation and a financial plan. In addition to lack of rural livelihoods and economic opportunities, which drive urban drift (plus gaining access to education and medical services), the RMI is vulnerable to higher costs of imported fossil fuels. Impacts vary (as in 2009) from more costly electricity, transportation, food and water, to loss of jobs together with economic stagnation, inflation, and less government revenue and grants spent on public improvements, including environmental management and pollution abatement. Renewable energy, together with energy conservation and efficiency are current growth areas in most nations' economies, or remain missed opportunities that add to vulnerability and risk retention. *Component 4* aims to mitigate climate change through the introduction and promotion of renewable energy (RE) technologies and promotion to invest in them. Shifting to renewable energy will lower RMI's dependency on imported fuels, but will also bring in new innovative technologies such as solar electricity, which will largely raise the nation's quality of life.

The terrestrial biodiversity of the Marshall Islands is threatened by numerous invasive plants and animals, such as *Merremia peltata* and *Wedelia trilobata*, the long-legged crazy ant and the red-vented bulbul (currently confined to Majuro). These are difficult and expensive to control or eradicate, and awareness and motivation are low. This project will improve these. *Component 5* of the project aims to make significant contribution to sequestering carbon through improved management of existing forests. Almost 70% of RMI's land cover is forested, with almost half of the total land area under coconut plantations and agro-forestry schemes. The reasons above account for the significant added value this project will provide to the Marshall Islands. The project will contribute to the ridges-to-reef programme (and vice versa) in the sense that it aims to take an integrated approach with regards to land use management, forest management and water management, in order to enhance their ecosystem services. Since the land area of the Marshall Islands is relatively limited, land-based actions will certainly have consequences on near-shore marine resources.

### **Samoa (LDCF; UNDP-supported project)**

Samoa has shown a strong commitment to addressing climate change issues and there is widespread awareness of climate change (CC) across the government. Samoa is also committed to energy security and mitigation actions through its desire to be carbon neutral by 2020. There are a number of documents and strategies providing a framework for the interventions on climate change adaptation and disaster risk management in Samoa, and a range of projects on the ground that are addressing CC adaptation. The National Adaptation Plan of Action (NAPA) presented in 2005, provides the overall framework of support for Adaptation work in Samoa, with identified adaptation priorities for the country. Implementation of this document has led to several NAPA projects. The National Climate Change Policy will be updated, and the draft Climate Change Programme Plan will contribute to building a road map for a Climate Resilient Samoa. The National Adaptation Plan (NAP), being promoted by the UNFCCC will update the National Adaptation Program of Action (NAPA).

At the sub-national level the Planning and Urban Management Agency (PUMA), Ministry of Natural Resources, Environment and Meteorology, is in the process of conducting a climate change vulnerability assessment of Apia, considering that climate induced disasters impact most severely on Apia, given the concentration of people, infrastructure and government services. Despite impressive progress in Samoa's policy and strategic framework, and a range of programmes that are under implementation, and results already achieved, climate change response in Samoa would benefit considerably from an 'economy wide' approach, as opposed to the present project-by-project approach. Several important initiatives of the Government of Samoa are pointing the way to move in the direction of a more 'economy wide', programmatic response to CC. Climate change is a cross-sector issue that will affect the whole physical and natural environment, society, and economy of Samoa and therefore the strategic engagement of the "Government as a whole" is going to be critical for increasing the impact of interventions on the ground, and moving towards a low-emission, climate resilient green development path.

The LDCF project proposed under Ridge to Reef intends to address the barrier of a fragmented policy approach, by

putting in place an enabling framework that will guide interventions on climate change and DRR/DRM, and will make adaptation to climate change a priority of “economic and social concern”. Furthermore, the interventions in the project will focus on implementing priorities highlighted in Samoa’s National Adaptation Program of Action (NAPA) document, conducting mobilization and capacity-building of women, youth, and CBOs across the country, to enable them to more effectively prepare for and manage risks, natural hazards, and adapt to climate change.

The objective of the LDCF project is to establish an economy-wide approach to CC in Samoa that provides for efficient integration and management of adaptation and DRR/DRM into national development planning and programming and for enhancing the resilience of communities to CC and natural disasters. The project will achieve this objective through a strategic combination of technical assistance and investments in hard adaptation options. It will do so, through three main components: 1) Overcoming barriers to a fragmented approach to CC policy and response; 2) Enhanced resilience of the communities as first responders to hazards and CC; and 3) Monitoring and Evaluation and Knowledge Management.

### **Tuvalu (UNDP-supported project)**

The first component of the project on Biodiversity Conservation will strengthen current protected areas and create new ones by assessing status in the 11 current areas established by the Kaupule (Island Councils) on 9 widely distant islands and atolls of Tuvalu and use the lessons learned to improve their management and develop consistent national policy and regulations on protected area management and use. The nationally developed Funafuti Conservation Area is the model for this process with the aim (within NBSAP 2011) of having at least 15% of Tuvalu under protected area status by 2015. Initial biodiversity, ecological and socioeconomic assessments will be repeated after 2 and 4 years to measure management effectiveness and applied to expand some of protected areas through a ridge-to-reef approach to include adjacent land and fish spawning aggregation sites. Noxious invasive species will be cleared from 3 islands before declaring them as protected areas. A Biodiversity Information System focused on indigenous and endemic species, and protected areas will be developed along with wide ranging capacity building in R2R concepts.

The GEF funds will be used to harmonize management arrangements and regulations in protected areas that have been established in a haphazard manner and incorporate these into national policy. LMMA have been established independently by the Island Councils but the Tuvalu government has lacked the capacity and logistics to assess their status and develop best practice. Moreover the few staff in the Department of Environment lack the logistic resources to visit these widely separated islands. With a Biodiversity Information System, the government, communities and NGOs will be able to make better decisions on land use and management. The 15% target is beyond reach without outside assistance.

The second component on SLM will rehabilitate degraded lands, including land in protected areas and also address NBSAP to use such activities to improve food security and traditional practices by working with the Kaupule, NGOs and women’s organizations to introduce drought- and salt-tolerant fruit and vegetable crops on 5 islands. The second objective is a contribution to ‘green’ and ‘blue’ CO<sub>2</sub> sequestration. This agroforestry initiative will replant degraded island and coastal forests with suitable hardwood and fruit tree species and, where appropriate, mangrove trees planted in 5 islands with suitable habitats. A particular focus will be on replanting old coconut plantations with more productive varieties.

The GEF funds will be used to rehabilitate large areas of degraded coastal and inland forests and, where requested by communities, repair degraded and abandoned taro ‘pulaka’ pits that are threatened by saltwater intrusion. The gradual degradation of these lands has resulted in a shifted baseline, with much of the population unaware of the original forest cover of these islands, and of the potential to grow swamp taro as a reliable food source. Many of the coconut palms are very tall and with reduced productivity; replacing these at whole island scale is a large and long-term project that requires additional funds. Finally Tuvalu is losing capacity to grow local foods; therefore a focus will be on providing suitable vegetable and fruit varieties to improve food security, which is decreasing with over-fishing and climate change threats.

The third component will link the regional Integrated Water Resources Management program with the other

components by emphasizing water management and introducing ridge-to-reef training. This recognizes that there have been many assessments of water management, thus the emphasis will be on: direct implementation of a drought action plan similar to the one developed in Kiribati; modifying the water components of the building code to be compatible with the socioeconomic conditions in Tuvalu; and conducting an economic feasibility study of options for centralized water reticulation and wastewater treatment systems. It is essential to capitalize on the GEF Funded Integrated Water Resources Management project. Therefore GEF funding assistance will bring the lessons learned from other Pacific countries and also from the GEF funded PEMSEA managed projects in southeast and east Asia to Tuvalu and integrate these into R2R broader capacity building.

### **Tonga (FAO-supported project)**

Four priority outcomes guide FAO support to Tonga. These include: (i) strengthening policy, legal, regulatory and strategic frameworks; (ii) increased production, productivity and resilience of crop, food and livestock systems; (iii) improved marketing systems and market access for traditional food crops and high value specialty commodities; and (iv) sustainably managed terrestrial, freshwater and marine resources. To date outcomes 1, 2 & 4 have received priority focus. Under priority outcome 1 assistance has been provided which strengthened MAFFF's capacity to analyze market data to provide evidence-based policy advice to government. This work helped demonstrate the importance of developing and maintaining systems of domestic market data collection and use, and also the value of good data for improved decision making. Further support for strengthening evidence-based policy and strategic planning were through participation in a sub-regional agriculture for growth study, a scoping study on agriculture tourism linkages, a rapid assessment of migration and its impact on agriculture and rural development and technical assistance for feasibility study on maize production in Tonga.

Support has also been on-going to strengthen forest policy and legislation which included mainstreaming of climate change and an EIA and Environmental Management Plan for the forestry plantations in Eua. Planning for implementation of an Agriculture Census is in process and this will remain a priority.

An on-going activity under outcome 2 is strengthening floriculture development through the import and use of disease-free planting material coupled with technical assistance to improve multiplication and production. This project is helping women improve livelihoods through enhanced income earning opportunities. A series of small projects under the Telefood program have strengthened household food production. Emergency assistance is provided to support the recovery of agriculture and fisheries livelihood systems following natural disasters. Support for aquaculture development is ongoing and sustainable aquaculture development continues as a priority.

Under priority outcome 3 FAO provides technical assistance on agribusiness and training courses on basic food hygiene and Codex Alimentarius that built capacity of private sector and government stakeholders to improve food hygiene.

Capacity building to promote adoption of techniques to reduce hazardous pesticide use in Pacific Agriculture is a regional intervention in partnership with SPC which will contribute to outcome 4 in Tonga. The outcome should be improved small farmer livelihoods and reduced environmental and food contamination by hazardous pesticides as a result of the adoption of IPM based and other reduced pesticide input technologies. Further support to sustainable agriculture has been through technical assistance for developing a national land use policy. The immediate objective of such a land use policy is to provide a reliable basis for (a) the increase of crop production so as to meet the country's food demands and reduce the import of goods that can be grown locally, (b) the protection of the limited land area against degradation and natural or man-made environmental hazards, and (c) the settlement of land conflicts between individuals and various sectors of the economy.

GEF resources will be utilized to fund the incremental costs of promoting integrated agro-ecosystem and sustainable forest management, building capacities of villages to practice integrated agro-ecosystem management systems; strengthen land administration, policy and legal frameworks that will facilitate village-level investments so that national and global benefits may be realized. Attention will be given to innovative economic and financing instruments, engaging the corporate and business sector, and recognition of good governance and sustainable practices.

### **Tonga (UNDP-supported Project)**

The first component on Biodiversity Conservation will focus on improving management in existing protected areas and establishing new PAs where biodiversity surveys indicate typical Tongan and Pacific flora and fauna. The few remaining areas of native forest will be conserved and expanded with new tree planting. Special efforts will be made to raise awareness of conservation amongst Tongan communities by rehabilitating degraded farmlands and introducing the concept of payments for ecosystem services. The target for forest rehabilitation is on Tongatapu and 'Eua. Marine conservation will be strengthened by replanting mangroves and protecting seagrass beds and coral reefs in Special Marine Areas, with the development of new PAs established to conserve threatened species in Faguata Lagoon and covering offshore coral islands. Peer-to-peer exchanges will occur with Pacific islanders experienced with the Locally Managed Marine Areas (LMMAs) system and with implementing Integrated Coastal Management (ICM).

Tonga has little experience in implementing holistic, integrated management of natural resources; therefore the GEF funding will be used to introduce Ridge-to-Reef concepts of IWRM and ICM through training within all Components and to increase capacity. Funding will ensure that all government sectors, donor organisations, NGOs and women and youth groups cooperate to develop a shared vision of biodiversity conservation and implement this through direct action in revegetating damaged farmlands and forests that are currently beyond the capacity of the government. A cooperative approach will be applied to developing protected areas, both existing and new, and in evaluating the economic benefits of protected areas and biodiversity with the view towards implementing a system of payments for ecosystem services.

For the component on CC-A, the project will respond to the vulnerabilities of the low lying islands of Tonga that are particularly susceptible to the effects of climate change. This component will introduce sustainable adaptation methods into the Ha'apai group to protect low coastlines with both hard structures and soft revegetation, plus ensure that the communities have ongoing supplies of freshwater for household use and agriculture for protection against periodic droughts. Revegetating coastal areas will be critical towards stabilizing shorelines and protecting underground water supplies. The objective is to demonstrate that communities on Pacific islands are capable of managing their coastal resources in the face of climate change, plus build resilience to other serious risk factors such as cyclones and tsunamis.

The GEF funding assistance (through SCCF that will be applied for in 2013) will be used as a response to the Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management, in which the people of Tonga recognized the need to prepare communities for impending climate change impacts, but noted that they lacked the resources in capacity and funding to develop significant demonstration projects. Funds will also be employed to take the lessons learned on Ha'apai to other islands in Tonga and make the lessons available for other Pacific islands.

Best practice demonstrations of effective and appropriate freshwater and waste management from throughout the Pacific will be introduced in 3 islands in Tonga to improve the management of freshwater resources, the implement effective control of pollution, and improve the management of coastal resources through planting of coastal and mangrove forests. The GEF funding assistance will be used to bring the lessons learned from the GEF Funded Integrated Water Resources Management project and lessons learned from the PEMSEA managed projects in southeast and east Asia to Tonga as part of broader capacity building.

### **Vanuatu (FAO-supported project)**

The project components on BD conservation and PA management are built on ongoing national initiatives by the Department of Environment, Forestry and Fisheries. Specific past interventions on which the project will be developed include the GEF-funded Vanuatu Local Conservation Initiatives Project and the ongoing Forestry and Protected Area Management Project and Australian Centre for International Agricultural Research (ACIAR) project which assisted in the establishment of a number of protected areas in Vanuatu by improving information flows and by establishing appropriate institutional structures.

The government, in association with other development partners, already undertakes activities in various projects and programmes that address some of the threats mentioned. The Department of Agriculture has a Plant Breeding Programme which provides planting material and support to local farmers, including research activities to broaden the genetic base of traditional crops. Likewise, the Department of Forestry has research and extension activities that produce and promote the availability of selected tree species. It has a limited network of protected areas. The Department of Fisheries has a network of marine protected areas, and manages fish ponds for the breeding of selected

species that supply these MPAs, including extension services providing technical advice to client communities.

The AusAID-funded Land Use Planning Project which aimed at strengthening land use planning and resource management systems to bring about sustainable development of land and other natural resources in Vanuatu will also constitute a baseline for the integrated land management component of the project

The project components, where possible, will synergize with proposed LDCF project on Increasing Resilience to Climate Change and Natural Hazards; the work program has already been approved by Council. Similarly, lessons learnt and good practices from the UN Joint Vanuatu Community Resilience to Climate Change & Natural Disasters program and SPC-GIZ Coping with Climate Change in the Pacific program will be incorporated in project development and implemented.

### **Regional Project (all 14 PICs) (UNDP-supported project)**

The regional multifocal area project (IW/SCCF) will introduce an integrated approach to natural resources management from the tops of the hills to the reefs and lagoons, which would otherwise be impossible with limited cross-sector coordination and communication. The project will build on nascent national processes built in the previous GEF IWRM project to foster sustainability and resilience for each island through: reforms in policy, institutions, and coordination; building capacity of local institutions to integrate land, water and coastal management; establishing evidence-based approaches to ICM planning; improved consolidation of information and data required to inform cross-sector R2R planning approaches. It is envisaged that this project will also focus much attention on harnessing support of traditional community leadership and governance structures to improve the relevance of investment in ICM, including MPAs, from 'community to cabinet'.

The regional project will also provide coordination functions and linkages with the GEF SCCF, biodiversity and land degradation focal areas in the national STAR projects and would facilitate dialogue and action planning through national Inter-Ministry Committees on responses to emerging land and climate issues. Similarly it will facilitate coordinated exchanges of experience and results of the GEF portfolio of investments in a broader regional R2R programme for PacSIDS. Linkages with co-financed activities on water resource and wastewater management, coastal systems and climate adaptation and disaster risk management will ensure more targeted capital investment in coastal infrastructure within an ICM framework. This project will assist in routine capture of information and reporting on incremental gains in physical, natural, and social capital in response to assessed climate and land threats. Best practices in capital investment for strengthening land and coastal resilience to climate variability and change will be shared regionally and globally among Caribbean and Indian Ocean SIDS. Similarly this project will foster solidarity among the PacSIDS, particularly with respect to the political will required to support more integrated approaches to R2R in natural resource management.

The regional project will be executed by the Secretariat of the Pacific Community (SPC) through its Applied Geoscience and Technology Division (SOPAC). This project will build on SPC programs which are funded through a mix of annual core funding sourced from donors such as Australia, New Zealand and European Union (EC) and project funding from a wide variety of donors. SPC is uniquely placed to support GEF initiatives such as proposed due to the technical focus and capacities of relevant divisions and programs it supports plus it has previous experience in undertaking similar GEF projects. Those baseline projects that provide co-financing at both a regional and national level are briefly described.

The Disaster Reduction Programme provides PICs with technical and policy advice and support to strengthen disaster risk management (DRM) practices in collaboration with other technical program areas within the division and SPC, and also with a range of regional and international development partners and donors. The Ocean and Islands Programme (OIP) works across a broad range of marine, coastal and island resource use, vulnerability and climate change adaptation issues. It offers a range of specialist technical capacities, skills and tools in support of members' needs. OIP delivers these services to members and other SPC divisions. The Water and Sanitation Programme (WSP) provides support to SPC member countries through capacity building, awareness and advocacy related to the management of water resources and the provision of water supply and sanitation services. The Coastal Fisheries Programme (CFP) supports SPC member countries management and sustainable development of coastal fisheries, near-shore fisheries and

aquaculture through assistance to governments and administrations in the development of scientifically informed and socially achievable coastal fisheries management policies and systems in line with the guiding principles of the 'Apia Policy'; the provision of a regional framework for sustainable aquaculture, in the areas of planning, research, development and trade, for PIC governments, private enterprises and other stakeholders; the development of sustainable near-shore fisheries in PICs to provide food security, livelihoods, economic growth and climate change adaptation. The Land Resources Division (LRD) seeks to improve the food and nutritional security of Pacific Island communities through development and sustainable management of land, agriculture and forestry resources. Specifically, the Integrated & Sustainable Resource Management and Development program assists SPC Member countries in integrated and sustainable agricultural and forestry resource management and development and the Food and Nutritional Security program seeks to improve food and nutritional security in PICs.

Several large regional and national projects support closely related initiatives. The SPC/GIZ 'Coping with Climate Change in the Pacific Island Region (CCCPIR)' Programme aims to strengthen the capacities of Pacific member countries and regional organizations to cope with the impacts of climate change with a focus on land (and coast) based natural resources such as agriculture, forestry and land use, fisheries, tourism, energy and education. The program has regional and national components and works in Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

EDF 10 Pacific Natural Disaster Facility objectives are to: strengthen institutional arrangements for disaster risk management so as to achieve Integration of DRM and Climate Change Adaptation (CCA) arrangements into central and key line ministries in Government with the goal of greater awareness and multi sector implementation of DRM actions; improve knowledge, information, public awareness, training and education so as to build awareness of risks, risk exposure and mitigation/response measures in-country, the provision of hazard and risk information through regional (PACDISNET) and local databases (local nodes) and strengthening human and technical capacity; improve understanding of natural hazards and their impacts so as to enable assessment of risk, risk exposure and vulnerability of countries and communities and the development and use of relevant tools addressing obvious gaps in baseline scientific, technical, social and economic data and taking into account the future potential impacts of climate change. The programme has both national and regional components and works in 14 PICs. The Annual Pacific Disaster Platform and Regional Climate and Water Consultations provides an ideal vehicle for high level integration of strategies and National level cooperation.

IUCN's Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (MESCAL) project seeks to address the key challenges of mangrove management in attempts to increase the resilience of Pacific Island people to climate change and improve livelihoods. MESCAL is funded by the German Government under the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). Similarly IUCN's Mangrove Rehabilitation for Sustainably-Managed Healthy Forests (MARSH) is intended to support the PNG Government in achieving the goals cited in the PNG Vision 2050. The project will foster community ownership of mangrove rehabilitation project sites, implement capacity-enhancement activities at the national and sub-national levels, and support scientific and policy research by local higher education institutions. The MARSH project is funded by USAID. These are complemented by the Biodiversity and Protected Areas Management Programme (BIOPAMA) which aims to develop a regional capacity building program in partnership with existing institutions, such as regional agencies and universities. The project involves updating and expanding curricula on conservation and protected areas, developing toolkits to address priority issues, training of decision makers, protected area staff, and others. This project is funded through Intra-ACP (Africa, the Caribbean and PICs) resources from the 10th European Development Fund (EDF).

The national and regional projects will be harnessed, enhanced, and linked together to foster the R2R pilot demonstrations, capacity building, experience sharing, coordinated approaches, and facilitation for incorporating the measures into national programmes and budget request cycles. The total co-financing from the baseline projects, including those coming from the 14 PICs covered by the regional project, is estimated at \$82 million for the regional project for a co-financing to GEF ratio of 4.3:1.



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

The Pacific Islands Ridge-to-Reef (R2R) program will incorporate STAR resources from each PIC into national R2R, multi-focal area demonstration projects with some including IW allocations to include integration with IWRM and ICM. Each Island State (except Fiji which is just outside the STAR flexibility envelope) has elected to program its 'flexible' STAR to one, two or all three STAR focal areas (Biodiversity, Land Degradation, Climate Change Mitigation) and one or more Strategic Objectives within these focal areas. The specific Global Environmental Benefits (GEB) delivered through each national R2R demonstration project will be defined within each country's respective project PIF. Broadly, GEBs to be realized will include:

1. Protection and/or sustainable use of globally significant biodiversity, including agro-biodiversity, in Pacific Island forests, agricultural lands, watersheds, and coastal areas;
2. Improved provision of agro-ecosystem, forest, watershed and coastal area ecosystem goods and services;
3. Reduced GHG emissions from agriculture, deforestation, forest and coastal degradation and increased carbon sequestration;
4. Enhanced climate resilience of Pacific Island ecosystems and societies through R2R program support to low emission, climate resilient development pathways; and
5. Improved management of coastal and freshwater resources of SIDS consistent with the GEF 5 IW Strategy, including conservation of coastal 'Blue Forests' that complement MPAs under biodiversity.

The practical application of R2R principles not only presents PICs with a unique opportunity to test, refine, replicate and upscale an emerging and highly appropriate environmental and economic sustainability paradigm, but also, through longer term mainstreaming of ICM/IWRM/SLM/SFM concepts, practices and policies, move towards a level of sustainability that could prove to be a model for up-scaling at the level of large continental river basins and linked coastal and marine areas. The PICs R2R Program also provides a unique opportunity to build capacity of local professionals (including new graduates and through continuing education), new stakeholder groups, and community leaders (mayors/chiefs) to build sufficient human capital on the islands for leading adoption of these integrated and participatory mechanisms to complement traditional measures and taboos.

With regard to benefits from utilization of SSCF funding, avoiding future infrastructure and economic losses with use of resilience measures will help each country reduce costs of disasters. Adoption of ICM policies and measures nationally will involve prior planning for infrastructure investments to avoid high risk areas and minimize vulnerability, so emergency costs for reacting to disasters should be reduced. Resilient measures introduced in the catchment pilot demonstrations should help reduce economic losses, increase farmer income, and sustain drinking water supplies that would be subject to droughts. Additionally, human health should be improved and hospital costs reduced with continued access to safe drinking water during droughts and reduction of sewage pollution of groundwater supplies and shellfish.

**G. Describe the socioeconomic benefits to be delivered by the Program at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF).**

Few States around the world are more dependent upon healthy and spatially concentrated natural environment resources for socioeconomic development than are the Pacific Island countries. In all cases, the global environmental benefits to be realized through R2R actions under each of the STAR focal areas and the SCCF and IW interventions will also deliver vital national socioeconomic benefits and contribute to the overall environmental and economic sustainability of each PIC. Among the principal socioeconomic benefits to be realized through the R2R program include:

Socioeconomic Benefits on the National Level (including adaptation benefits): At the national level, storms, floods, and droughts typically affect productive capacity by destroying physical and human capital. Replacing that capital is costly and takes time (especially in the case of damages to infrastructure). Avoiding these losses and increasing local resilience

helps each country reduce costs of disasters. Adoption of ICM policies and measures nationally will involve prior planning for infrastructure investments to avoid high risk areas. This will also reduce the emergency costs for reacting to disasters that are looming large for national budget outlays in the face of increasing storm frequency and intensity.

**Socioeconomic Benefits at the Local Level:** Socioeconomic benefits for the target communities in the pilot demonstration catchments will be realized from improved provision of ecosystem services related to food production, safe drinking water, productive soils, clean and healthy environments and resilience to impacts of climate change. As an example, the incomes of fishermen in pilot project areas should improve in the medium to the long-term as any overfishing is effectively addressed in priority coastal fisheries and co-management is implemented with communities to conserve key fisheries/nursery habitats (so-called fish refugia). Restoration and protection of mangroves and coastal wetlands will not only enhance local fishing incomes but also reduce the vulnerability of coastal villages and urban areas to climate change impacts related to storm surges and sea-level rise. Additionally, people dependent on forest products, farmers, and those in the tourism industry would benefit from sustainability of their natural resources including through more secure livelihoods and enhanced food security. Drought management measures and drinking water contamination prevention measures have enormous local benefits to villages and towns compared to economic and social hardship, increased diseases, and loss of life from recurring droughts and likely groundwater and waters supply contamination in the expected baseline.

**Gender dimensions:** By benefitting those who work in agriculture and in protecting drinking water sources, the Program will also benefit women who, in many cases, deal with these issues. Additionally, gender will be mainstreamed in the Program through the active engagement of women to optimize the impacts of the interventions at all levels. In many coastal communities, women are primarily responsible for food security for their families, where and when to gather seafood including shellfish for consumption by the family. In larger tuna fisheries, women play an important role in post-harvesting processing, yet they remain largely invisible and their roles unacknowledged. The individual project M&E plans will include the collection of information with gender disaggregated to the extent possible to document involvement of women, youth, and the elderly who have valuable local knowledge of traditional measures and taboos.

## **H. Justify the type of financing support provided with the GEF/LDCF/SCCF resources:**

At the regional level, the incremental financing support for the R2R program is justified in terms of: a) enabling the Pacific Island Countries to operationalize a regional model for multi-country cooperation in addressing shared or common environmental problems towards biodiversity conservation, sustainable integrated management of land, forest, water and coastal resources and climate resilience to protect livelihoods; b) demonstrating a R2R approach or island-based approach as the case may be that is most appropriate for the very similar biogeographies of sub-groups of the PICs as described in Section C and Annex D) influencing and leveraging scarce national resources and donor support which are normally sector in approach towards integrated approaches in natural resource and environmental management; and d) facilitating the harvest and dissemination of best practices among the PICs and in other SIDS globally.

The proposed programmatic approach that is multi-focal, multi-trust fund and multi-agency involving 14 geographically-dispersed SIDS, although with limited precedence in the GEF, is clearly the most appropriate approach in the case of the Pacific Island Countries. The need to conserve and protect the natural resources on which the livelihoods and even the lives of people in the PICs depends spans a wide range if not all of the focal areas within the GEF – from biodiversity, land degradation, climate change mitigation through LULUCF, sustainable forest management and international waters. In addition, and perhaps most critical among SIDS, is building resilience to the impacts of climate change which may be best achieved through an integrated approach that is possible only through a multi-focal area, multi-trust fund program and projects. The combined strength of the UN agencies with strong presence and experience in the Pacific, UNDP, UNEP and FAO, is being harnessed to implement this program at regional and national levels.

The R2R programmatic approach could present a model in programming GEF resources in similar settings. Historically, the smaller countries such as the PICs have been slow to program their allocations from GEF. The first contributing factor pertains to the resource requirements of supporting programs and projects in geographically isolated areas where infrequent and low-traffic air travel translates into high costs. Employing a unifying theme of R2R presents opportunities

for economies of scale. The second factor is limited in-country capacity which requires strengthening over the years. Thus, an underlying focus of the proposed program is capacity enhancement in the PICs to implement the sub-projects that will ‘test’ integrated R2R approaches to prepare the countries for a potential next phase of the R2R program that will upscale and replicate successful and proven R2R approaches. Financial sustainability of the demonstration pilots and innovative measures carries a “medium” risk as noted in Table I on risks. Various alternative proposals are listed under mitigation measures and will need serious discussion during programme preparation as well as preparation of individual national STAR projects.

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

Risk	Level	Mitigation Measures
Limited commitment and capacity of PICs to mainstream integrated approaches in environmental and natural resources management into national development planning and to link upstream IWRM with coastal ICM processes.	Low	This risk will be minimized through targeted capacity building support to PICs to introduce ICM, IWRM and R2R concepts, planning tools and methodologies, drawing in part from UNDP’s extensive ICM experience and networks in Asia and the Pacific region and regional and global UNDP and other GEF Agency IWRM and ICM capacity building networks such as CapNet and PEMSEA.
Budgetary processes of PICs reduce expected baseline programs of ministries with adverse impact on program	Low	The strategy of national projects complemented with a regional one in the program is designed to demonstrate national political commitment and priority by ministries to the components of the program. Once documented at endorsement, the expected baseline efforts in natural resources should not be a problem unless a serious national disaster hits.
Limited capacity for project implementation in most Pacific Island Countries	Medium	GEF agencies will ensure adequate levels of project technical, administrative and financial support and backstopping are in place for effective results and financial delivery in each of the national R2R demonstrations and the regional/IW component. Special capacity building and training is included to focus on local talent to build human resources for integrated approaches and involvement of the University of South Pacific.
Climate change and variability compromise achievements in sustaining ecosystem services and in damage of infrastructure	Medium	IWRM and ICM, and their integration via R2R approaches, represent widely accepted water, land and coastal area planning tools for building climate resilience of ecosystems and societies. By promoting improved natural resources (land, water, biodiversity, etc.) management through integrated, ecosystem-based ‘R2R’ approaches and with assistance from the SCCF, the Pacific Islands R2R program will in turn enhance climate resilience in communities in each of the Pacific Island countries. The adoption of ICM policies will institute planning measures to avoid hazard and risk areas so risks to new infrastructure may be somewhat reduced.
Successful demonstrations not sustained or scaled up due to a lack of financial resources	Medium	There should be many opportunities presented by climate change financing mechanisms to develop sustainable financing arrangement for PacSIDS, In addition appropriately valued coastal environmental service supporting food security, tourism and blue carbon have the potential to yield sustainable financing opportunities. MPAs and systems of protected areas both have possibilities for sustainability through co-management and through fee systems.

**J. Outline the institutional structure of the program including coordination and monitoring & evaluation:**

UNDP will serve as the lead R2R Program Coordinating Agency and oversee final design and implementation of national demonstration projects in several of the PICs (Cook Islands, Fiji, FS Micronesia, Nauru, Niue, Samoa, Tonga, Tuvalu). UNEP and FAO will serve as GEF Agencies for the R2R national projects in Palau and Republic of Marshall Islands (UNEP), and Kiribati, Tonga and Vanuatu (FAO). UNDP will serve as GEF agency for the ICM/IWRM

linkage, policy development and capacity building regional project financed primarily under the International Waters focal area.

**Country consultations.** The program is owned by the countries that are participating, and in this case, all the 14 PICs. UNDP as PCA has regularly informed the countries through a series of Bulletins that were circulated to the countries and other stakeholders. These were prepared with inputs from the GEF and other agencies about the nature of the initiative, the underlying concept and progress of engagements with the countries. The consultations culminated through the convening of a special meeting of the GEF Pacific Constituency that was held in Sydney on April 4-5, 2013 where the draft program framework document was presented, including respective national priorities that will be supported by the project. The Constituency expressed overwhelming support for the program through respective endorsements. The special meeting served also as a forum for dialogue to improve the implementation of GEF-supported projects in the region.

**Program coordination and management.** The R2R program as a whole will be guided by an R2R Program Steering Committee (PSC) which will meet annually to review progress, provide strategic guidance and advice, and facilitate program level coordination and communication. The R2R PSC will include representatives from each PIC (preferably the Chairperson of the national inter-ministerial committee that is described below), the GEF agencies (UNDP, UNEP, FAO) and SOPAC. The GEF Pacific Constituency could undertake a bigger role beyond being the recipient of regular briefing about the program. To the extent that most of the designated PSC members may also be country representatives to the GEF Constituency, it may be possible to piggy-back the PSC meetings to the GEF Constituency meetings. This arrangement could be both effective and cost-efficient.

The regional project will provide overall R2R coordination support and will be executed through the South Pacific Applied Geoscience and Technology Division (SOPAC) of the Secretariat of the Pacific Community (SPC). UNDP has a firmly established partnership with SOPAC as an Executing Agency with strong comparative advantage in water and coastal resources management and this R2R programme component will build on and complement the existing UNDP/UNEP/SOPAC efforts and partnerships.

A full time international staff person will be hired through the regional project to coordinate and support the implementation of the national R2R projects. The coordinator will be part of the broader regional R2R team that will provide technical and programmatic support not only for the regional project activities but also for the national R2R projects as may be requested by the countries.

**National R2R project implementation.** Each national R2R Program project will feature a representative, multi-stakeholder Steering Committee including relevant local and national government agencies, NGO/CBO, private sector and UN system participants (known as a national inter-ministry committee (IMC) building on the structures that have already been established in each PIC through the existing UNDP/UNEP/GEF IWRM project). National IMCs will meet bi-annually to review progress, provide strategic advice and support adaptive project management.

The UNDP national demonstration projects will be executed via either national execution (NEX) modality or direct execution (DEX) modality following dialogue between the responsible UNDP Country Offices (UNDP Samoa covering Samoa, Cook Islands, Niue; UNDP Fiji covering Fiji, Nauru, Tuvalu, Micronesia, Tonga; UNDP Papua New Guinea) and the respective governments during the project preparatory phases.

In Vanuatu, the FAO project will be executed by the Departments of Environment, Agriculture, Forestry and Fisheries. General oversight will be the responsibility of a national multi-stakeholder committee meeting regularly in the country. Technical backstopping will be provided by FAO with a minimum of two missions per year, with back-up from a multi-disciplinary Project Task Force. Additional support will also be requested from CROP Agencies in specialized areas as necessary. Implementation and execution arrangements will be evaluated for cost-effectiveness during project preparation and will be fully elaborated in the final FAO-GEF Project Document. The FAO R2R project in Kiribati will be implemented in cooperation with the Ministry of Environment, Land and Agricultural Development.

UNEP will implement its two R2R projects in cooperation with the respective government executing agencies: in Palau,

the GOP Office of Environmental Response and Coordination and in the Marshall Islands, the Office of Environmental Planning and Policy Coordination.

**Monitoring and evaluation.** The program and all individual projects will be subject to standard GEF Agency (UNDP, UNEP, FAO) and GEF monitoring and evaluation processes including annual Project Implementation Review, independent mid-term and final evaluations, and timely completion of focal area Tracking Tools. All projects in the program will have M&E plans developed during preparation and a special indicators component of the regional project will test development and use of a simplified, yet integrated GEF reporting framework to avoid each country having to produce tracking tool submissions for as many as 5 focal areas, including SCCF.

**K. Identify key stakeholders involved in the program including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:**

Design of the respective R2R national priorities PIFs will include comprehensive identification of, and consultation with, relevant regional, national and local stakeholders. Typologies of likely stakeholder groups to be involved will include:

Local: NGOs, CBOs, municipal governments, women's associations, local businesses

National: Relevant national government agencies, UNDP Country Offices, academia, FAO/UNEP local offices, private companies (national, multi-national)

Regional: SOPAC, SPC, UNDP/GEF Regional Technical Advisors, other CROP agencies, regional NGOs

UNDP, FAO, and UNEP as international organizations will work with their constituents in the Pacific to bring participative approaches to the Program and projects. SOPAC and its link to CROP agencies and the SPC will ensure awareness and participation opportunities among Pacific countries and their relevant Pacific regional organizations. Relevant government ministries in each PIC will be involved as part of national inter-ministerial committees for the national R2R demonstrations and ICM/IWRM work. Local villages, towns, community groups, and especially their leaders (mayors to chiefs) in priority catchment-coastal demonstration areas will have roles in national projects to provide input and to participate as noted in each project's Stakeholder Participation Plan to be available at endorsement. NGOs and civil society will be invited to participate as specified in each Stakeholder Participation Plan.

The Program Steering Committee will also be designed through a constituency approach to ensure broad representation of key stakeholder groups including governments, UN agencies, NGOs, private sector, academia, etc. The national inter-ministry committees already established for GEF-UNDP-UNEP IWRM project will be enhanced and operational per specifications in the Stakeholder Participation Plans.

**L. Indicate the co-financing amount the GEF agency is bringing to the project:**

**UNDP.** UNDP will provide \$740,000 primarily as grant from its internal resources as co-financing for the regional program support R2R project and the national R2R projects in Cook Islands, Fiji, FS Micronesia, Nauru, Niue, Samoa, Tonga and Tuvalu. These funds will be programmed during the preparatory phases of the respective national and regional projects.

In addition, UNDP will provide the equivalent of \$250,000 in Water Resources Management courses, training materials, and databases available via the UNDP Cap-Net program that can support project implementation including capacity building, strategic planning processes, legislative reform and mainstreaming of climate and gender into IWRM. Available relevant training materials include:

- Groundwater in IWRM
- IWRM as a Tool for Adaptation to Climate Change
- Conflict Resolution and Negotiation Skills for IWRM
- Integrated Water Resources Management Plans

- Why Gender Matters - a tutorial for water managers
- Streams of Law; a training manual and facilitators' guide on water legislation and legal reform for integrated water resources management
- Economics in Sustainable Water Management

UNDP offers two regional projects upon which the program could build on. The first is the 'Pacific Resilience Program' which focuses on strengthening governance mechanisms for DRM and CCA at the sub-national and local levels in Vanuatu, Solomon Islands, Tonga and Fiji. The goal of the program is to strengthen the resilience of the Pacific Island communities to disaster and climate change related risks. The program centers on two components that will be implemented under on coordinated and integrated program: 1) risk governance; supporting mainstreaming of DRM and CCA into development planning and budgeting at all levels of government; and 2) community-level risk management; strengthening community resilience through targeted and inclusive community-based DRM and CCA (supported through a community small grants scheme) and integration of risk management into local governance mechanisms. The program will be will run for an initial period of four years (up to 2016) with an overall budget of \$16 million.

The second regional project is 'Enhancing the Capacity of Pacific Island Countries to Address the Impacts of Climate Change on Migration'. The overall objective of the project is to develop the capacity of PICs to address the impacts of climate change on migration through well-managed, rights-based migration schemes and policy frameworks, supported by comprehensive research and knowledge building. While priority countries for national level activities are Kiribati, Nauru and Tuvalu, the project has regional component to improve knowledge sharing and cooperation on the issue of climate change-induced migration and labor migration. As of the first quarter of 2013, the project is currently being designed by the three UN organizations that will jointly implement the project, namely ESCAP, UNDP and ILO. The total project cost is estimated at about Euro 1.91 million and the UNDP share for co-financing the program is estimated at \$820,000.

**FAO.** FAO will bring the following co-financing to the R2R project in Vanuatu:

USD 500,000 in kind: This will include the provision of technical assistance and expertise from FAO Rome and from the Sub-regional Office for the Pacific Islands.

USD 500,000 grant: This co-financing will be provided through FAO's Technical Co-operation Programme (TCP) and global projects with activities in Vanuatu.

**UNEP.** UNEP is projected to provide in-kind co-financing of \$400,000 for the national R2R projects in Marshall Islands and Palau.

**M. How does the program fit into the GEF Agency's program (reflected in documents such as UNDAF, CAS, etc.) and the Agency staff capacity in the country to follow up program implementation:**

The United Nations Development Assistance Framework for the Pacific Region for 2013-2017 coincides with most of the R2R program duration. It recognizes that the *general challenge for the countries in the region is to ensure the sustainable management of their terrestrial and marine and natural resources and heritage, from the regional to the local level, and the adaptation of individuals, communities and states to climate and environmental change and natural hazards, as well as to be well prepared to respond to natural disaster events and population related consequences.* The UNDAF 2013-2017 will support PICs<sup>5</sup> to ensure the sustainable development, management and conservation of their terrestrial and ocean environment, given the unique dependency of the PICTs on these resources for their livelihood, food security and economic development. Further, the UNDAF will strengthen adaptive and disaster risk management capacity to reduce vulnerability to climate change, natural hazards, and environmental degradation particularly among the most vulnerable groups, which often include the urban and rural poor, women, youth, and children. This requires individuals to be aware of existing natural hazards risks of climatic as well as seismic nature and their potential changes to understand the implications for their lives. In essence, true sustainability of any disaster risk management and climate change adaptation intervention needs to increase individual capacity.

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<sup>5</sup> The UNDAF also covers Pacific territories, in particular Tokelau.

**UNDP.** UNDP's Strategic Plan for 2008-2013 approved by the UNDP Executive Board includes Managing Energy and the Environment for Sustainable Development (Goal 4), and includes the outcome "Strengthened national capacities to mainstream environment and energy concerns into national development plans and implementation systems".

UNDP has taken further internal steps to operationalize the mainstreaming elements of the Strategic Plan at a subsidiary level through its Water Governance Strategy endorsed by the UNDP Management Group in 2007. The Water Governance Strategy includes as one of its three Strategic Priorities Reduce poverty and vulnerability, sustain and enhance livelihoods and protect environmental resources by helping countries to achieve equitable allocation and efficient water resources management through adaptive water governance and the associated Outcome, Assist countries to formulate and implement water governance reforms (legal, policy, institutional frameworks) to improve sectoral development and management processes and instruments, including IWRM plans (or national equivalent)

In October, 2012, UNDP adopted and launched its new Biodiversity Strategy, "The Future We Want: Biodiversity and Ecosystems – Driving Sustainable Development" at the 11<sup>th</sup> Conference of Parties to the Convention on Biological Diversity. Under this new strategy, UNDP will work with governments to find new ways to finance biodiversity management through domestic revenue, innovative financial mechanisms, and donor funding from a range of sources. The Ridge to Reef Programme is closely aligned with and supports implementation of the UNDP Biodiversity strategy through the strategy's three focus areas or signature programs: 1) Integrating biodiversity and ecosystem management into development planning and production sector activities; 2) Unlocking the potential of protected areas so that they are better managed and financed, and can contribute to sustainable development; and 3) Managing and rehabilitating ecosystems for adaptation to and mitigation of climate change.

UNDP's work on improving governance of international waters incorporates both freshwater and marine water bodies and has for some time applied a R2R approach recognizing the freshwater-marine continuum and important linkages between upstream water and land management and the health and integrity of downstream coastal and marine ecosystems. Underscoring this approach is UNDP's poverty reduction mandate and commitment to preserving and enhancing food security and livelihoods of the nearly 2 billion people who depend on healthy, functioning marine and freshwater ecosystems. In terms of implementing GEF IW projects, UNDP has consistently delivered results through a broad range of GEF International Waters projects with two highly satisfactory interventions in the Pacific for IWRM as well as collective management of the Southern Pacific Warm Water Pool and its valuable tuna resources with UNDP providing vital technical, financial and capacity building support for the establishment of the world's first post UN Fish Stocks conservation and management organization for highly migratory fish stocks, the Western and Central Pacific Fisheries Commission.

In managing its global portfolio of freshwater, marine and coastal programmes, UNDP's Water & Ocean Governance Programme ([www.undp.org/water](http://www.undp.org/water)) draws on a wide range of staff expertise in water resources management, water supply and sanitation, fisheries and marine/coastal resources management at HQ, in its Regional Centers, and through its network of Country Offices. Senior advisors at HQ and in regional centers all have relevant Ph.D.'s (fisheries economics, water resources management, environmental management/policy, marine resource economics, etc.). The Programme and Projects will be directly supported by a team of experienced UNDP Regional Technical Advisor based in the Asia-Pacific Regional Center and by the UNDP Principal Technical Advisor at UNDP Headquarters with responsibility for global oversight of the UNDP Water & Ocean Governance programme. UNDP also builds on its extensive field presence in over 130 countries.

UNDP-GEF's capacity in Ecosystems and Biodiversity is demonstrated through on-going work with over 146 countries to support the current implementation of 274 projects with a value of USD 3.4 billion that achieve multiple development benefits. Roughly USD 900 million constitutes grant financing from the various funds administered by the Global Environment Facility (GEF). More than 25 highly skilled staff based in regional centres and Headquarters, along with a vast network of UNDP staff in country offices around the world, support efforts to develop the capacity of countries to better manage ecosystems and biodiversity. Since 2000, an area of over 244 million hectares of production land has been directly impacted by UNDP-GEF's support to modify production practices in the agriculture, fisheries, forestry, tourism, extractive industry and other sectors. Over this period, projects have reported cumulative impacts across more than 2,000 PAs covering almost 280 million hectares, including marine, terrestrial and indigenous and community

conservation areas.

**UNEP.** UNEP's comparative advantage derives from its mandate to coordinate UN activities with regard to the environment, including its convening power, its ability to engage with different stakeholders to develop innovative solutions and its capacity to transform these into policy- and implementation-relevant tools. UNEP's comparative advantages in the GEF are aligned with its mandate, functions and Medium Term Strategy and its biennial Programme of Work (2012- 2103). The proposed project is consistent with the Ecosystem management thematic priorities, Climate change and the Environmental Governance thematic priorities outlined in UNEP's Medium-term Strategy.

UNEP has a large portfolio of similar projects in the Pacific including four Biodiversity projects partially funded by the GEF PAS. Three of these are multi-country projects which means its catchment of countries involved in these projects spans the whole Pacific region. These projects have been in development since 2006, underscoring UNEP's collective knowledge of the region in areas of biodiversity, sustainable land/forest management, biosafety and POPs. Its close ties with the UNEP/World Conservation Monitoring Centre and Secretariat for the Pacific Regional Environment Programme (cemented in a recently signed MOU guaranteeing collaboration with all projects which align with this one) means there is opportunity to leverage this project with the benefits which come with these agencies (e.g. UNEP's Pacific Office is co-located with SPREP affording maximum opportunity for liaison and cooperation). SPREP also is Executing Agency for three GEF PAS projects (two BD and one POP's/pollution) for which UNEP is Implementing Agency which also allows maximum continuity/complimentarity and mutual support between this and the existing projects. Similarly, with UNEP as IA for the Micronesia Challenge which includes Palau, FSM and RMI, the same benefits can occur. And again the outputs from this project can be incorporated into the enabling Multi-Environmental Agreement project (Africa, Caribbean and Pacific) for which UNEP is IA and SPREP is EA (noting that the second phase for this project has been signalled for May 2013 with SPREP as EA once again). Similarly, this project can be integrated into the Pacific State of the Environment Capacity Development project for which the UNEP is also IA.

The project activities are consistent with the delivery of UNEP's work programme at the regional level across three of its sub-programmes – ecosystems management, climate change and resource efficiency. At the technical level, complementary activities include the promotion of ecosystem management. The framework provided by the UNEP-Administered International Environmental Conventions on Climate Change, Biodiversity and Land Degradation provides insight into ways of promoting coherence on indicators reporting that can satisfy GEF and convention needs while simplifying a daunting task for the PICs. UNEP's strength in catalyzing multi-country cooperation related to development of innovative approaches and tools makes it a strong candidate to implement the indicators component 4. UNEP's comparative advantages in this proposed project are aligned with its mandate, functions and Medium Term Strategy and its Biennial Programme of Work (2012- 2013).

**FAO.** FAO has considerable technical expertise and experience in the areas encompassed under the three national projects (e.g., biodiversity conservation, Climate Change mitigation and adaption, sustainable land, water and forest management). These projects fit squarely within the strategic objectives of the Organization.

FAO provides advice to governments and other stakeholders in the formulation and implementation of appropriate land, water, forestry and fisheries management policies, strategies and action plans. The projects will benefit significantly from the range of FAO's project databases, information systems and global public goods. Priority programmes which will support these projects include the range of sustainable fisheries management activities, including the ecosystem approach to fisheries; sustainable crop production and intensification (Save and Grow); climate smart agriculture; conservation and sustainable use of biodiversity important to agriculture.

Similarly, the proposed projects fit well within FAO's mandate in the area of sustainable forest management. Key programmes include forest law enforcement and governance, forest monitoring and evaluation to support SFM and REDD+ activities as well as development and dissemination of technical manuals, guidelines and best practices on SFM and biodiversity conservation.

FAO has a Sub-Regional Representation for the Pacific (in Samoa) with 20 full-time multidisciplinary staff, including agriculture, forestry and fisheries specialists. The office currently manages a diverse portfolio of projects delivering in



the order of USD 12 million per annum. In addition, each project will benefit from support of a multi-disciplinary Project Task Force comprised of FAO technical staff based in Apia, Rome and Bangkok.


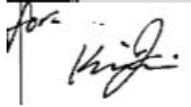

**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**  
 (Please attach the [Operational Focal Point endorsement letter \(for programs accessible to all GEF Agencies\)](#) and [Operational Focal Point Endorsement letter \(for programs accessible to GEF Agencies with board\)](#) with this template.

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>DATE(mm/dd/yyyy)</b>
Mr. Vaitoti TUPA	Director, Cook Islands National Environment Service	Cook Is.	APRIL 4, 2013
Mr. Andrew YATILMAN	Director, Office of Environment and Emergency Management	Fed. States of Micronesia	March 27, 2013
Mrs. Taina TAGICAKIBAU	Permanent Secretary, Ministry of Local Government, Urban Development, Housing and Environment	Fiji	March 27, 2013
Mrs. Nenenteiti Teariki RUATU	Deputy Director (Officer in Charge), Environment & Conservation Division, Ministry of Environment, Lands and Agricultural Development	Kiribati	April 5, 2013
Mr. Warwick HARRIS	Acting Director, Office of Environmental Planning and Policy Coordination (OEPPC)	Marshall Is.	April 4, 2013
Mr. Russ KUN	Permanent Secretary, Department of Commerce, Industry and Environment	Nauru	March 25, 2013
Mr. Sione TONGATULE	Director, Department of Environment	Niue	March 26, 2013
Mr. Sebastian R. MARINO	National Environment Planner, Office of the Environmental Response and Coordination, Office of the President	Palau	April 4, 2013
Mr Gunther JOKU	Acting Secretary, Department of Environment and Conservation	Papua New Guinea	April 2, 2013
Mr. Taulealeausumai Laavasa MALUA	Chief Executive Officer, Ministry of Natural Resources and Environment	Samoa	April 2, 2013
Mr. Joe HOROKOU	Director, Environment and Conservation Division, Ministry of Environment, Climate Change, Disaster Management and Meteorology	Solomon Islands	April 4, 2013
Mr. Asipeli PALAKI	Secretary and CEO, Ministry of Lands, Environment, Climate Change and Natural Resources	Tonga	April 5, 2013
Ms. Perpetua Election LATASI	Acting Director of Environment, Department of Environment	Tuvalu	April 5, 2013
Mr. Albert WILLIAMS	Director, Department of Environmental Protection and Conservation, Ministry of Lands and Natural Resources	Vanuatu	April 4, 2013

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation. Following the new project cycle, UNDP will submit all PIFs under the program within 6 months after Council approval of the PFD.

<b>Agency Coordinator, Agency name</b>	<b>Signature</b>	<b>DATE (mm/dd/yyyy)</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>Email Address</b>
Adriana Dinu UNDP		April 04,2013	Jose Erez Padilla	+66 2304 9100 ext 2730	<a href="mailto:jose.padilla@undp.org">jose.padilla@undp.org</a>
Maryam Niamir-Fuller Director, GEF Coordination Office, UNEP		April 04,2013	Greg Sherley	+685 27473	<a href="mailto:Greg.sherley@unep.org">Greg.sherley@unep.org</a>
Laurent Thomas Officer-in-Charge Investment Centre Division Technical Cooperation Department FAO TCI-Director@fao.org  Barbara Cooney GEF Coordinator, FAO Barbara.Cooney@fao.org	  	April 04,2013	Gavin Wall	+685-20710	<a href="mailto:Gavin.wall@fao.org">Gavin.wall@fao.org</a>



3. Niue: Application of Ridge to Reef Concept for biodiversity conservation and for the enhancement of ecosystem and cultural services in Niue	1,376,147	963,303	1,834,862	160,550			4,334,862	390,138	4,725,000	Jun-13
4. Palau: Advancing Sustainable Resources Management to Improve Livelihoods and Protect Biodiversity	1,761,468	458,716		160,550		743,119	3,123,853	281,147	3,405,000	Jul-13
5. Papua New Guinea: Strengthening the Management Effectiveness of the National System of Protected Areas	10,385,321	844,037					11,229,358	1,010,642	12,240,000	Jul-13
6. RMI: Sustaining atoll habitability, livelihoods and ecosystem resilience through integrated management of water, food, biodiversity, coasts and waste	1,761,468	412,844	1,743,119	160,550			4,077,982	367,018	4,445,000	Aug-13
7. Tonga (UNDP): Implementing a 'Ridge-to-Reef' approach to protect biodiversity, ecosystem functions, and adapt to and mitigate climate change in the Kingdom of Tonga	834,862	211,009	550,459	160,550			1,756,881	158,119	1,915,000	Sep-13
8. Tonga (FAO): Sustainable Land and Agro+A13-ecosystem Management Systems for Tonga	458,716	366,972	1,009,174			610,092	2,444,954	220,046	2,665,000	Nov-13
9. Tuvalu: Implementing a 'Ridge to Reef' approach to protect biodiversity and ecosystem functions, and adapt to climate change in Tuvalu	1,376,147	541,284	1,834,862	160,550			3,912,844	352,156	4,265,000	Sep-13
10. Vanuatu: Integrated Sustainable Land and Coastal Management	1,058,950	724,771	1,651,376	160,550		1,145,032	4,740,679	426,661	5,167,340	
<b>Total FSPs</b>	23,229,041	5,394,495	11,747,706	1,284,404	0	3,675,613	45,331,260	4,079,813	49,411,073	

## Annex B Sub-Project Summaries

### 1. Sub-Project: Cook Islands: Conserving biodiversity and enhancing ecosystem functions through a “Ridge to Reef” approach in the Cook Islands

**Objective:** *To build national and local capacities and actions to ensure effective conservation of biodiversity and enhancement of ecosystem functions within and around marine and terrestrial PAs (including community conservation areas)*

#### **Project Components**

##### Component 1: *Strengthening national system of protected areas*

**Baseline Activities:** Current baseline investment by the Cook Islands Government into environmental management related actions with a bearing on biodiversity totals at least USD 15 million dollars over the planned 5 year life of the project. This includes Government investment through the National Environmental Service of approximately USD 0.8 million per annum to incorporate biodiversity management in national and sectoral policies and planning processes and to promote community participation and actions to conserve biodiversity. Additionally, the Ministry of Marine Resources invests USD 1 million annually on the monitoring and control of illegal practices in its marine areas, on the implementation of the Cook Islands Lagoon Monitoring Programme (which includes water quality monitoring in Rarotonga, Aitutaki and Manihiki) and on an education and public awareness programme on marine issues. Despite existing investments and activities, under the business-as-usual scenario, PAs will remain poorly managed and under-funded, and threats to biodiversity therein will continue. Traditional protection areas – called Ra’ui- (commonly, seasonal closures of an area to ensure replenishment of a stock of an important economic species) will not be effectively operationalized to ensure biodiversity conservation and to ensure ridge to reef connectivity. The current context of limited community capacities and knowhow to effectively manage their traditional protection areas will continue. The current low government capacities and cross sectoral collaboration (particularly National Environment Services and Ministry of Marine Resources) to fulfill PA management functions will also continue. Under the business as usual scenario, legislation for the management of protected areas including clarity in mandates for preparing and enforcing protected areas management plans to avoid and reduce adverse development impacts will continue to be insufficient; and government’s capacities to engage stakeholders to develop and implement participatory management plans will continue, leading to a lack of general public involvement in management.

**Incremental reasoning:** The project will strengthen the capacity of the Government to manage the Cook Islands Marine Park, including community based management of local marine and terrestrial ecosystems designated as community conservation areas. At the national level, the project will support the Government’s efforts to promote conservation in one of the world’s largest marine reserves. The project will assist the Government to strengthen the legal provisions governing PA management, amongst other things to clarify management mandates. The roles and responsibilities of the national Government and local Government agencies and local communities will be clarified—with respect to the discharge of different PA management functions. Support will be provided to zone the park, delineating strict protection and sustainable use zones. A comprehensive management plan for the marine reserve will be developed. The capacities of NES and MMR staff to deliver PA management functions will also be strengthened (these functions would include—participatory management planning, monitoring resource use, reporting, and enforcement). A key action of the project will be to assist the Cook Islands identify and access sustainable financing for protected areas system nationally. This will seek to increase Government budgetary appropriations for PA management, utilise existing allocations more effectively, and tap additional funds (i.e. tourism fees<sup>6</sup>). These funds would be deployed to address threats, including the control of invasive species, and

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<sup>6</sup> Options include, allocation of a portion of the airport tax to conservation, investment of fishing license fees in management of the MMR—especially to regulate the activities of distant water fishing vessels, and tourism sector investment—whereby tourism businesses sponsor conservation work (a further review of these options will be undertaken in the PPG stage).

enforcement. At the local level, in order to operationalize the large marine reserve, the project will target relevant areas in the southern group of islands. It will strengthen the management of at least 11,700 ha of community conserved reef/ marine/ coastal areas that have already been identified as Key Biodiversity Areas. These will include several sites in Rarotonga (1,600 ha), Aitutaki Island Key Biodiversity Area (4,300 ha), Mangaia Island KBA (400 ha reef), and Palmerston KBA (5,400 ha of reef and lagoon). Such conservation work will be complemented by the strengthening of community conservation of terrestrial areas equaling at least 11,200 ha. This will include at least 2,900 ha of Atiu Island, 100 ha of Takutea Wildlife Sanctuary, 5,200 ha of Mangaia Island KBA and 3,000 ha of Mitiaro Island KBA. The project will develop appropriate mechanisms for local capacity building –building on existing vehicles (such as through local school teachers/ marine and environment staff/ and/ or possibly deploying additional manpower on site to assist in conservation planning and awareness and working with local NGOs). Traditional Ra’ui management will be strengthened to discharge PA functions, including participatory management planning, management actions (including specific actions to protect globally threatened species and habitats), monitoring and evaluation and enforcement (including inspection and fines). These will be developed in close consultation with local leaders (traditional and formal) and local communities. Local businesses, NGOs and local youth will be involved in PA monitoring. The project will also ensure that there are clear legal provisions to empower local environmental wardens to enforce locally agreed rules and regulations effectively. The project will also ensure that PA management includes issues of resilience to climate change such as coral reef management through the protection of refugia; enhancing reef connectivity; and sustainable fishery management. The global biodiversity benefits of the project will arise from the effective management of the newly established marine park covering at least 1.1 million square kilometres, which will include effective community conservation of 22,000 ha of critical marine and terrestrial ecosystems as a sub-system of the wider PA. As noted previously under the environmental profile of the country, over 20 species of globally threatened coral species and over 13 globally threatened marine animal species are found in the Cook Islands. Effective management of the large marine protected areas will ensure that the habitats of such threatened animal species and the species themselves are afforded better protection. In addition conservation efforts on islands will ensure that populations several endemic and globally threatened species of birds will continue to survive and thrive.

**Component 2: *Effective mainstreaming of biodiversity in key sectors to mitigate threats to protected areas from production landscapes***

**Baseline Activities:** Outside protected areas, the Ministry of Agriculture invests around USD 0.25 million annually on ‘biosecurity’ related activities, such as strengthening internal bio-security controls to prevent the introduction and spread of alien invasive species in the country (through periodic training and capacity building); and promoting a “Biological Soil School Programme” aimed at implementing eco-friendly methods of soil/water management. The Cook Islands Tourism Corporation invests around 3.3 million US dollars – mostly on tourism promotion activities nationally and internationally, which is significantly ecosystems based. A significant number of households in the Cook Islands still practice farming for subsistence, and increasingly in Rarotonga, for the sale of products to the local market. Under the business as usual, the current trends of increasing use agrochemicals – such as inorganic fertilizers and pesticides in agriculture, will continue. Such chemicals not only effect long term on-land productivity, but leach and pollute streams and lagoons and have negative impacts on biodiversity. Current practices of farmers clearing natural vegetation for agriculture – such as for pineapple farming- which increase the likelihood of soil loss from such land, as well as cause loss of important natural habitats, will continue. The national agricultural service’s current low capacities to promote effective landuse and agricultural practices and to ensure coherence of their work with protection work in the landscape/ seascape will also continue. Similarly, the plans and programmes of the tourism sector will also continue to have negative impacts on global biodiversity values through poor incorporation of environmental code in the development of tourism facilities and in tourism activities. The current scenario of limited contribution by tourism businesses (such as resorts) towards conservation actions will continue.

**Incremental Reasoning:** The project will mitigate threats to protected areas from production sectors – specifically focusing on two key production sectors – agriculture and tourism. The project’s interventions will focus in areas linked upstream of marine community conservation areas and/ or linked to terrestrial community conservation areas to cover the areas outside protected areas, such that they complement the protected areas management as part of a “ridge to reef” approach. The project will first ensure that overall landscape management – including PA management – is incorporated into the integrated island

development plans being developed for each inhabited island<sup>7</sup>. With regard to the agricultural sector, the project will assist the Government to undertake measures to ensure that the threats posed by the agriculture sector to biodiversity are effectively mitigated. This will include developing a national strategy for conservation-friendly agriculture as well as working with farming households and farmers groups at priority sites to sustainably intensify farming<sup>8</sup> with the explicit purpose of avoiding habitat loss. The project will also promote the cultivation of indigenous crops and trees (fruits/ nuts etc.) and helping link farmers to markets for these products. This will include supporting farmers to undertake a more integrated pest and also fertility management to reduce dependence on agrochemicals by more judicious use of such chemicals (amounts, timings) as well the use of more organic fertilizers. The project will also work with farmers (who are usually small holders) to plan and plant fruits and others along the contour to avoid soil and nutrient runoffs and to avoid clearance of ecologically sensitive areas for farming.

The project will also work to mainstream biodiversity conservation into tourism development. The proposed actions under this will include integration of biodiversity considerations into the tourism accreditation process; ensure planned tourism infrastructure developments are biodiversity friendly (setbacks from sensitive habitats.) and assist the national tourism promotion centre to promote eco-based tourism as an incentive for conservation

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<sup>7</sup> Critical to ensure the infrastructure such as roads are not placed in ecologically sensitive areas, and that decisions to award land to development, including tourism, seek to avoid the loss of critical ecosystems, and reduce impacts where unavoidable.

<sup>8</sup> Conservation farming would seek to ensure proper soil and water conservation measures on farms (including ditching and terracing as needed to reduce erosion and the subsequent loss of on farm productivity—which is a driver of farm expansion).

2. Sub-project. **Fiji: Implementing a “Ridge to Reef” approach to Preserve Ecosystem Services, Sequester Carbon, Improve Climate Resilience and Sustain Livelihoods in Fiji**

**Objective: to implement a “Ridge to Reef” approach to Preserve Ecosystem Services, Sequester Carbon, Improve Climate Resilience and Sustain Livelihoods in Fiji**

**Project Components**

Component 1. Conservation of Terrestrial and Marine Biodiversity:

**Baseline:** The business-as-usual scenario for terrestrial and marine biodiversity would be continued degradation. A PA system exists but legal and formal recognition and subsequent management subject to various constraints. Nature Reserves were established under Fiji’s Forestry Act (now Forest Decree). Reserves have now reverted to Native Land ownership so no assurance that reserves will continue. Poorly coordinated governmental level co-ordination & authority over protected areas (existing PAs managed by communities dealing mainly with NGOs, especially FLMMA and fisheries but not other government Departments) thus limiting the pooling of resources and uncertainty regarding the objectives and management structure linkages with government departments. Despite the success of FLMMA, none of the sites have a format or legislative basis and enforcement. Some remain overfished and subjected to poaching even by commercial fishermen.

**GEF Alternative/ Incremental Reasoning.** This component of the project is designed to support the implementation of key elements of Fiji’s Biodiversity Strategy Action Plan (2003) to identify areas of high biodiversity and sustainable productive areas such as Marine Protected Areas (MPA) which are being recommended for protection. In 2009, Fiji had 249 sites as Marine Protected Areas under the work of Fiji Locally Managed Marine Areas (FLMMA). At the PA site level, the project will work in 2 existing (Sovi Basin in Waidina Catchment & Natewa/Tunuloa IBA) and 2 new (Vunivia Catchment & Vatudamu in Labasa Catchment) terrestrial PA, as well as 2 existing (Vunivia & Labasa Catchments) and 3 new marine PAs (Vutia – downstream from Waidina catchment, Vunivia and Natadola – downstream from Tuva Catchment). The PA system in Fiji is more advanced in the marine ecosystem compared to the terrestrial mainly due to the work of FLMMA and other NGOs. Terrestrial catchment work is just picking up now with the IWRM work almost coming to an end and the official formation of the first ever Catchment Management Committee (Nadi) being formed. A ridge to reef approach inevitably results in catchment management groups being formed in the 5 watersheds identified in this project.

Component 2: Integrated Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape

**Baseline:** Land degradation is a growing concern. There is a lack of any land use planning policy in watersheds, and there is only limited implementation of existing regulations, leading to:

- Fragmentation and destruction of forests, primarily due to encroachment from expanding agriculture and human settlements
- Degradation of coastal / marine ecosystems (coral reefs, mangroves, seagrass beds) from upstream sources of pollution (fertilizers and pesticides) and sedimentation
- Unmonitored & uncontrolled unsustainable logging practices

**GEF Alternative/ Incremental Reasoning.** This component of the project will focus on all the 5 identified watersheds. In particular, coral reef ecosystems within MPAs directly offshore of the watershed have been severely impacted by siltation (e.g. Waidina & Tuva), nutrient loading and pollution (e.g. Labasa). To address these problems, the Government of Fiji intends to take a “Ridge to Reef” approach that will apply interventions from the high elevations of the watershed (where degradation is most severe). At the overall watershed level, the project will focus on strengthening planning and management frameworks, capacities and awareness for participatory sustainable resource management.

Component 3. Conservation, Restoration and Enhancement of Carbon Stocks through Sustainable Forestry (CC Focal Area and SFM/REDD +):



**Baseline:** Mitigation measures are needed to focus on maintaining forest carbon stocks and increasing sequestration of carbon through forest conservation, reforestation, afforestation and enrichment planting to stem the expected baseline of declining forest stocks and conditions of the forests.

**GEF Alternative/ Incremental Reasoning.** Conservation, restoration, and enhancement of carbon stocks will contribute to biodiversity conservation, improved watershed management, and improved food security. Within the watershed, field-level interventions will focus on five areas within the 5 selected project sites (Sovi basin, Vunivia catchment, Vatudamu in Labasa Catchment and the Natewa/Tunuloa IBA). These communities were selected based on: the current existence of relatively large amounts of forested areas and proximity to and impact on degradation of habitat and ecosystem services downstream in protected marine areas. For instance, the Sovi basin is within the Waidina watershed which affects the protection of the Muanaicake-Nasoata mangrove protected area downstream. Protection of the Vatudamu forests also affects the healthiness of the one of Fiji's priority area of Mangrove downstream: Labasa delta river mouth. Reforestation of the open grasslands using pine in the Tuva catchment will improve the ecological integrity of the coral reefs downstream in the Natadola bay which has a five star hotel, thereby promoting eco-tourism activities. At all these sites, seedlings produced by local nurseries will be planted and local community members and DFNP staff will be trained to maintain and monitor the re-vegetation processes; in some places, activities may also include the removal of invasive alien species (e.g. African tulip) that have colonized degraded areas. The conservation of forests within the Vunivia catchment and Namena coupled with the re-forestation of grasslands within the Labasa catchment will lessen adverse impact on the valuable Great Sea Reef downstream in the corresponding marine seascape.

Component 4: Knowledge Management:

**Baseline:** Knowledge generated by the project must be disseminated. In the absence of the project, this would not occur.

**GEF Alternative/ Incremental Reasoning** This component will focus on improving data and information systems on biodiversity, forests and climate change, land management and good practices. Development of information portal for easily accessible data and information on biodiversity, forests and climate change and sustainable land and water management practices. Knowledge products on all thematic/focal areas and best practices developed and disseminated through various media.

3. Sub-project. **Kiribati: Sustaining Land Management and Biodiversity within the Context of Addressing Global Climate Change**

**Project Components**

**Component 1: Promote Sustainable Management of Protected Areas (BD-1)**

Safeguarding key biodiversity areas require a variety of governance approaches, including protected areas, community conservation areas (CCAs) and co-managed sites. The best approach will vary from place to place depending on the context and community needs. A network of such sites, coupled with species-specific actions and anchored within a matrix of compatible land uses, provides the best way to ensure the conservation of locally and globally important biodiversity. The objective of the first component is to improve the management capacity for remote atoll ecosystems in occupied and unoccupied situations meeting objectives of the GoK program of work on Protected Areas (PoWPA) and relevant government policies. This will be achieved through development of comprehensive network of locally managed protected areas. For the financial sustainability, ecotourism model will be developed, tested and implemented through provision of incentives and enabling environments. Government's and relevant stakeholders' capacity gap will be assessed, and trainings packages on best practices and measures on establishment and management of conservation and protected areas will be developed and facilitated. Awareness program to support the initiatives focusing on BD conservation, environment protection and protected areas management will be developed and implemented. The project will contribute to the ridge-to-reef programme (and vice versa) in the sense that it aims to take an integrated approach with regards to land-use, water and coastal management, to enhance ecosystem services.

**Component 2: Promote sustainable & integrated management of Landscape (LD-3 & IW-3)**

The people of Kiribati have depended very much on their traditional knowledge system (traditional skills of cultivation and fishing, traditional herbal medicine, to name a few) for survival in the atolls. Much of these knowledge systems are sustainable and can certainly, without clash, contribute to traditional natural resources management which have allowed people to live harmoniously with nature. Based on the local knowledge and practices, integrated natural resource management practices for the flow of agro-ecosystem services will be identified/designed, verified and tested involving the communities living near the protected areas and occupied atoll. Sustainable land & water management practices for atoll land and agricultural system like organic farming, composting, water harvesting technologies, etc. will be identified and promoted. Effective land use planning (eg. regimes, best practices applicable to atolls, resettlements) will be developed in consultation with the stakeholders. Environmentally friendly and traditional local coastal protection knowledge that address issues of erosion, threatened ecosystems and increase of carbon stock will be identified and promoted. Similarly, sustainable levels of fish harvesting and other marine food sources will be researched and proper monitoring and evaluation methodology established and tested for occupied atoll ecosystems. Effective wastes management practices and use of clean and efficient technologies will be promoted to support the INRM practice and to reduce pollution to agro-ecosystem including PA from agricultural and industries.

**Component 3: Project Management**

Under the project management and support component, capacity support programme will be established and operational for the duration of the project and in years out with minimal external support required. Communications between the relevant government agencies, NGOs and community groups occur regularly via established platforms which are recognized and endorsed as mechanisms for essential communication. Relevant training needs in project management will be identified through training need assessment and facilitated. Efficient systems and processes will be in place to meet monitoring, evaluation and reporting requirements.

#### 4. Sub-project. Nauru: Implementing a “Ridge to Reef” approach to sustain ecosystem functions in Nauru

**Objective: To preserve ecosystem services, improve climate resilience and sustain livelihoods in Nauru using a Ridge-to-Reef approach**

##### **Project Components**

###### Component 1. Conservation of Marine Biodiversity:

**Baseline:** The business-as-usual scenario for marine biodiversity and land management in Nauru is one where: i) existing initiatives remain under-funded and only minimally managed for the foreseeable future; ii) areas important to represent biodiversity will remain unprotected, and Nauru will remain far short of its national goals for coverage of conservation areas; and iii) management of critical ecosystems in terrestrial and marine areas will continue on an ad-hoc basis with little consideration of downstream impacts or sustainable livelihood opportunities. The long-term solution is to implement a ridge-to-reef approach that combines a functional, representative and sustainable national system of coastal and marine managed areas integrated with the adoption of appropriate SLM practices in adjoining / upstream watersheds. This will effectively reduce land degradation and enhance protection for marine and coastal biodiversity and habitats.

**GEF Alternative/ Incremental Reasoning.** This component of the project will focus on improving the management effectiveness of new marine conservation areas. This will include the establishment of a network of locally managed marine areas (LMMAs) covering at least 15% of Nauru’s total coastline, which is equivalent to 2.8km of Nauru’s total perimeter. The project will strengthen LMMAs through the development and implementation of management plans following participatory approaches and Integrated Coastal Management (ICM). Additional activities include the re-vegetation of coastal areas to prevent erosion and subsequent siltation of LMMAs.

###### Component 2: Sustainable Land Management:

**Baseline:** Land degradation, which occurs in the 70% Topside, is being addressed by the NRC through projects involving reforestation with indigenous species as well as the testing of suitable species for beautification and food crops. An initial site, known as Pit 6, has several test plots of tree species. A new undertaking for rehabilitation is being performed on a one hectare plot with a more accelerated timeline and a more directed, less experimental approach. Majority of the people who live in Bottom-side are very poor and are in need of access to clean water, healthy food and secure, affordable housing. Short term goals for addressing these needs can be developed and addressed with suitable projects that will build human capacity and increase the physical and mental wellbeing of the population. The European Union is providing US\$500,000 for improving Nauru’s water catchment systems while AusAID is providing US\$1,000,000 for improving water storage capacity. The Republic of China is providing US\$500,000 to develop micro-finance for promoting agri-business (such as vegetable farming and livestock).

**GEF Alternative/ Incremental Reasoning** This component of the project will focus on securing local community buy-in on integrated landscape management practices. Assessments on the biophysical, demographic and socioeconomic of the entire island will be conducted with focus on the Bottom-side and applicable ‘ridge’ and Topside areas that are not covered by mining. In addition, the draft land-use and patterns of land ownership will be reviewed and revised accordingly. Soil and water conservation measures will be implemented including the rehabilitation of degraded land in ‘ridge’ and Topside areas with economic species such as fruit trees. Furthermore, community water storage facilities will be increased in four water-stressed areas in order to meet water demand for home gardens and household use.

###### Component 3: Governance and Institutions:

**Baseline:** Government of Nauru provides baseline spending in support of the management of the environment and natural resources throughout the country. The Environment Division within MCIE will spend an estimated US\$500,000 from 2014-2018 in coordinating environmental policy, laws and programs. Funding from communities that are beneficiaries of the

project through community-based interventions in marine biodiversity conservation and land management is estimated at US\$125,000. These will be in the form of in-kind contribution through provision of local materials and labor. In addition, bilateral donors are providing funding to Nauru throughout the project lifetime.

**GEF Alternative/ Incremental Reasoning** This component of the project will focus on mainstreaming biodiversity conservation and SLM into policy and regulatory frameworks. As a first step, policies will be developed for key sectors such as environment, waste management, natural resource management, coastal fisheries, agriculture and land-use. To support the development of policies and to ensure national ownership in the process, national agencies will also undertake training in specific areas of policy formulation including drafting of legislation; monitoring and evaluation of physical, biological and chemical parameters; project management, implementation and oversight skills; GIS; and land-use planning. Altogether, a total of 45 officials would be trained and be able to use the training in respective sectors such as DCIE (15); NFMRA (15); NUC (5); Ministry of Health (5); and NRC (5). Local communities will also undergo training for empowerment on biodiversity conservation skills, sustainable land management techniques as well as climate change adaptation awareness. Other community capacity building activities include training on project management, land-use planning, LMMA and ICM.

#### Component 4: Knowledge Management:

**Baseline:** Knowledge generated by the project must be disseminated. In the absence of the project, this would not occur.

**GEF Alternative/ Incremental Reasoning** This component will focus on improving data and information systems on biodiversity conservation and land management best practices and relevant sectors. It will involve integrating data and information using a user-friendly system. In addition, the component will develop knowledge products (such as videos, photo stories, flyers, brochures) on all thematic areas. It will also capture best practices of the project and disseminate through various media, print and broadcast.

5. Sub-project: **Federated States of Micronesia: Implementing an integrated “Ridge to Reef” approach to enhance ecosystem services, to conserve globally important biodiversity and to sustain local livelihoods” in the FSM**

**Objective:** *To strengthen local, State and national capacities and actions to implement integrated ecosystems management through “ridge to reef” approach in all four States of the FSM*

#### Project Components

Component 1: Strengthening the management of State and community level actions to expand and manage protected areas as part of R2R approach (both marine and terrestrial)

**Baseline:** The FSM has been promoting both conservation and sustainable use of natural resources through the establishment of protected areas as well as promoting ecosystems management outside protected areas. The protected areas in the FSM are primarily of two types – State level protected areas and community conservation areas. Such protected areas have been established both on terrestrial and marine areas. As reported in FSM’s 4th National Report to the CBD, 14% of the terrestrial area is protected, and 7 % of territorial waters are protected, with Chuuk State having 2% marine and 18% protection, Kosrae having 7% and 8% protection, Pohnpei having 29% and 20% protection, and Yap having 10% marine protection. Communities in all four states of the FSM have strong cultural and social ties to the environment. There are several beliefs and practices that link certain species to the origins of families (in Pohnpei, for example). However, with rapid changes in population, consumption and changes in people’s lifestyles have weakened such traditional linkages in many communities,

thereby putting pressure on natural resource exploitation/extraction. Thus, unless critical biodiversity hotspots are included under formal legal protection, globally important species and ecosystems will be lost or degraded.

**GEF Alternative/Incremental reasoning:** The project will support the expansion of protected areas in all four States, to include additional terrestrial and marine areas under formal protection. These will include both State level protected areas under government management and community conservation areas under land and marine areas that are legally owned by local communities. The project will also assist the government to effectively manage the newly created PAs as well as some of the existing ones. These are expected to lead to improved status of globally threatened species and ecosystems. The project will support the development of tailored policy, legal institutional arrangement and capacities for the management / support to Protected Areas in 4 States (policy / legal support strengthened for PAs, capacities and institutional mechanisms for management planning support, enforcement and reporting as well as learning and sharing between States, working with NGOs and other stakeholders instituted/ strengthened). This will include: (i) introduction of standardized PA reporting and performance monitoring system; (ii) standardized monitoring and reporting system on indicators of biodiversity and ecosystem health (iii) strategic capacity building for government and other stakeholders (NGOs, communities) on PA management within the context of R2R iv) Data and information system on the PA management, including biodiversity status, financing, and climate change risk management. The project will also ensure effective site and cross-site level PA management practices such as (i) improved PA management planning and boundary demarcation, (iii) setting up biodiversity/ ecological monitoring systems; (iv) enforcement strengthening (surveillance, interception of malfeasance), (v) community level training tailored to improving management of specific threats at each site. The awareness on the importance of PAs, especially values and benefits of PAs will be analysed and communicated to national, States and local decision makers, and the general public, through intensive evidence-based awareness campaigns through various media, including the social media, to ensure increased commitment and support to PAs.

#### Component 2: Integrated ecosystems management and restoration outside protected areas to enhance ridge to reef connectivity

**Baseline:** Past works on PA have mostly been restricted to each site and has not been implemented with a consideration of wider ecosystem linkages from outside protected areas. This has meant that outside protected areas, threats such as over exploitation and unsustainable harvesting methods and practices have continued. These include: destruction of coral reefs and associated ecological communities (e.g. coral extraction, reef anchors); and over exploitation of marine organisms (e.g. reef fish, sea cucumbers, giant clams). destructive and unsustainable fishing methods – e.g. dynamite, chlorine, fish poisoning plant (*Derris elliptica*) and small mesh gillnets; over exploitation of fish aggregation spawning sites; marine sand mining, dredging operations, causeway and sea wall construction; hunting, especially of the Micronesian pigeon (*Ducula oceanica*) and the Caroline Islands ground dove (*Gallicolumba kubaryi*). Additionally, household and farm waste have been shown to be causing land and water pollution – from sewage well as through waste from domestic animals (pigs, particularly), and through the leaching of agrochemicals into waterways. In addition, oil spills from boats and seepages from coastal waste dumpsites also impact coastal and marine areas. A recent study has confirmed the impacts on household pig farming waste on the stream water quality in Pohnpei.

**GEF Alternative/Incremental Reasoning:** The project will support integrated ecosystems management and restoration outside protected areas to enhance ridge to reef connectivity so that there is effective management of a mosaic of landscapes outside protected areas leading to threats to PAs from such landscapes, and leading to improved habitat integrity/ connectivity. Actions will be supported to reduce threats to ecosystem functions (encroachment, pollution / sedimentation, mining) from household and land/management practices. Maintenance and increase of natural vegetative cover in landscape through restoration of upland forests, savannah and mangroves will be promoted. This will include support for the preparation of community –led integrated landscape management plans development and implementation that will promote effective implementation of soil and water conservation measures, including measures to increase water availability, and efficient use (groundwater, etc.), stream bank stabilization and effective household waste management to reduce pollution of streams and water sources. The project will also support improved management on agricultural lands by households resulting in reduced threats to PAs: including Enrichment planting using agroforestry crops on steep sloping land, using native agro-forestry species, and pig waste management to reduce impacts on water quality (especially in Pohnpei).

6. Sub-project: **Niue: Application of Ridge to Reef Concept for biodiversity conservation, and for the enhancement of ecosystem service and cultural heritage in Niue**

**Objective:** *To strengthen conservation and sustainable use of land, water and marine areas and their biodiversity by building on their cultural heritage values through national and community actions*

**Project Components**

Component 1: Catalyzing conservation initiatives at site and landscape / seascape level through Ridge to Reef Approach

**Baseline:** Niue has placed a strong emphasis on conservation of its heritage, including its natural heritage. It's National Strategic Plan 2009-2013 has identified "Sustainable use and management of Niue's natural resources and environment for present and future generations". It has also ratified the three Rio Conventions and developed national action plans such as the NBSAP. Whilst basic economic values (such as use of wild resources for food, the provision of water, tourism values from nature etc.) are known, full values of its ecosystems in terms of biodiversity values and cultural values have not been documented thus the current PAs have not fully incorporated multiple values of the ecosystems. So its actions to formally create protected areas have led to the establishment of two terrestrial and two marine areas<sup>9</sup>. These cover 23% of its land area and insignificant area of its marine areas. Thus, significant areas of global and national importance have not been formally included under its national system of protected areas. Though communities have been setting aside land and reef areas as permanent or periodic closures, these areas have been of relatively small sizes for them to effectively conserve important global biodiversity, especially as wider surrounding areas around them have continued to be degraded or mismanaged, through overharvesting of resources (particularly species such as flying foxes, coconut crabs) and land conversion for agriculture. Such community set-aside areas have also not been given formal legal designation as protected ecosystems. Additionally, current conservation initiatives have not taken an integrated ridge to reef approach. This issue is particularly relevant to Niue with land owned by local families.

**GEF Alternative/Incremental reasoning:** The project will assist the government of Niue to establish new terrestrial and marine protected areas that will build on already set aside by local communities as important areas under traditional practices and include additional areas that ensure ecosystems connectivity between such areas. This will include the establishment of a new terrestrial community conservation area covering 2,550 ha that will encompass at least 7 traditionally strictly protected sites and their surrounding zones. In addition, the project will also support the creation of new marine conservation areas close to conserve important reef areas that have linkages with the terrestrial conservation areas, in order to ensure a coherent "ridge to reef" management system. The project will also support the creation of a new marine conservation area in the high sea in the Beveridge Reef, which may be an important recruitment area for important marine species. By undertaking these actions, the project will contribute to a significant increase in the conservation and sustainable use of globally important ecosystems and species in Niue. Key outputs will include community conservation and management plans that clearly delineate traditional strict protection zones (Tapus), and sustainable use zones around them for resources used or harvested by local communities in designated zones, with resource inventories, plans, and agreed mechanisms for enforcement. The project will also support management plan implementation capacities development at village and cross-village levels, including i) setting up of ecological monitoring and resource management systems; (ii) restoration of ecosystems fragmented and degraded by land conversion; (iii) other community training tailored to improve management of specific threats to the PA; and iv) securing pro-conservation livelihoods.

Component 2: Strengthening knowledge, capacities and partnerships for Ridge to Reef concept application outside protected areas

**Baseline:** The government of Niue has been supporting agriculture development, and promoting sustainable land and water management throughout the island through its Department of Agriculture, Forestry and Fisheries. It has developed a Forest

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<sup>9</sup> Terrestrial: Huvalu Conservation Area and Hakupu Heritage and Cultural Park (HHCP); Marine: Anono (formerly known as Namoui) Marine Reserve and Alofi North(TCA) Temporary Closed Area

Management Plan, Fisheries Management Plan, as well as integrated water resources management plan. It has also been undertaking actions to effectively manage its waste in order to avoid contamination of its underground water lens on which all residents depend for drinking water supply. However, under the baseline activities, sectoral plans have not effectively internalized the multiple benefits of integrated land, water, biodiversity, and seascape management. Ecosystems management is seen as primarily a sector priority (of the Environment Department) and the multiple benefits of integrated production landscape management have not been maximized through targeted support to communities to manage landscape and seascape – especially at those areas that have been considered critical from the perspective of global environmental as well as local values (for cultural heritage, water bore hole areas) etc. Therefore, under the baseline, biodiversity conservation in conservation landscapes and seascapes will continue to be impacted by unsustainable land use practices outside them and the ecosystems and cultural values of such areas will also be negatively impacted through community and other sector activities.

**GEF Alternative/Incremental Reasoning:** The project will support the communities to manage their “production” landscapes outside the designated conservation areas effectively. They will be supported to integrate environment friendly actions in their community development plans. Community capacities will be built to monitor their landscapes to identify threats both at their village level, and through cooperation with adjacent villages, also at wider landscapes/seascapes and effectively mitigate them. Where appropriate, farming/forestry practices (such organic farming; avoiding forest clearance at critical sites) and fishing practices will be introduced to promote sustainable use. Sector plans and actions will also be supported to effectively promote ridge to reef management - particularly in education, culture, water management, community development sectors. Environmental curriculum tailored for Niue will be introduced in the school curriculum, and senior students will be involved in ecosystems monitoring and study activities so as to build their knowledge of their environment. Small scale waste management activities will also be supported to minimize pollution of water – both freshwater and marine areas. Additional national capacity building actions on R2R will also be implemented, particularly on environmental monitoring and enforcement capacities (reefs, water quality, oil spill/ballast water release prevention, etc.).

## 7. Sub-project. **Palau: Advancing Sustainable Resources Management to Improve Livelihoods and Protect Biodiversity**

**Objective:** To effectively maintain ecosystem services by building institutional capacity to manage the Protected Area Network of Palau

### **Project Components**

#### **Component 1: Sustainable land/forest management:**

**Baseline:** The Project will contribute to implementing the strategic plan (Palau Forestry Health Program Strategic Action Plan 2009-2014) which was designed based upon a survey and assessment of invasive species. Palau's lowland forests are considered one of the most intact in the Pacific and home to over 1353 species of plants of which at least 135 are endemic to Palau. Currently the rare endangered palm, *Ponapea palauensis* of the Rock Islands and the endangered *Parkia parvifoliola* of the volcanic island of Babeldaob are being nominated as endangered species using the IUCN criteria. At least 64 endemic plants of the volcanic islands are being nominated as vulnerable. At least 162 bird species including 111 migratory birds and 51 resident species (of which 10 are endemic) have been recorded in Palau. The endangered megapode, *Megapodius laperouse* is currently being monitored. Two bat species, 92 species of landsnails, and 46 species of herpetofauna and at least 5,000 insects have been described. The above assets make Palau an exceptional area for biodiversity and conservation value including "hot spots" for plants and bird associations. The IUCN rated conservation status of many species and the threats to their habitat demonstrate the need for urgent mitigation steps which this project will start to provide.

In summary the main threat to Palau's marine and terrestrial biodiversity and sustainable forest management are destructive use and polluting practices (compromising land and marine based ecosystem services such as potable water and sedimentation affecting near shore marine and terrestrial ecosystems) and invasive alien species.

**Incremental Reasoning.** The the project will benefit Palau by enhancing the protection of its resources, biodiversity, and ecosystem functions and services by improving the design and strengthening implementation and management of the two national strategic initiatives, Protected Areas Network (PAN) and Sustainable Land Management (SLM). Specifically these improvements will include development of a strategic plan for the implementation of the SLM policy with a focus on its three key components (e.g., coordination & communication, best sustainable practices [i.e., master plans, land-use plans] and sustainable finance). For the PAN, it will include incorporation of new sites into the PAN, attaining effective management of these sites, trial-testing the monitoring protocols, mainstreaming land-use plans that address ecosystem threats in a holistic manner.

The reasons above account for the significant added value this project will provide to Palau. In turn Palau provides one of the few relatively truly unspoilt archipelagos in the world, especially in the tropics, with their physical geographic nature intact. The main difference managing in perpetuity this natural character is the relative continuity of pristine quality which is genuinely unique on a global scale.

The project will contribute to the ridges-to-reef programme (and vice versa) in the sense that it aims to take an integrated approach with regards to land use management, forest management and water management, in order to enhance their ecosystem services. Since the land area of Palau is relatively limited, actions taken on land, will certainly have consequences on near-shore marine resources.

#### **Component 2: Improving Palau's protected area network**

**Baseline:** The PAN Act was approved in June 2003 and sets up a system for managing a protected areas network. In November 2009 Palau began collecting an exit tax ("Green Fee") paid by departing passengers from Palau for funding the network. A set of criteria have been developed in order to be qualified for inclusion in the PAN. The Green Fee Act was initiated in November 2009, and the funds are being used for the operation of the PAN and is the co-financing mechanism for this project. The criteria include enabling State legislation, an assessment of the resources, community support and a



management plan for a site. Under the Act States retain ownership of the protected areas and management is assisted by the PAN Management Committee and PAN Technical Committee (comprised of states, government agencies and NGOs). Additionally, associated protocols and tools for management effectiveness are under various stages of development and implementation. The PAN Self-Sustaining Financing Bill is currently in effect and distributing funds for the management of PAN sites. Currently there are nine (9) out of the ROP's sixteen (16) states with PAN sites and the remaining states are undergoing the application process. The PAN is the primary approach to, not only, ensure effective conservation of biological diversity, but also of effective management of natural resources in general. These accomplishments have resulted in some positive impacts on both national and community level conservation efforts (i.e., increased number and size of protected areas and increase in public awareness about biodiversity), they are not enough to ensure effective management of these protected resources, without additional assistance from this project, as many gaps still remain, including limitations in technical capacity, financial resources, coordination and integrative policies, which will all enhance the ongoing PAN effort that has been initiated.

The natural assets and their related issues in Palau create a scenario of fragmented components which justifies the objective of the project which is essentially to progress the concept of the Protected Area Networks. The intention is to create an inclusive approach (with respect to the natural assets and human induced characteristics such as administration) which is absolutely essential given the tiny size of Palau (population of about 15,000 residents) and the inherently complex administration (e.g. 16 states) and the intention of managing the natural resources in a permanent framework including the Micronesia Challenge. Thus many of the elements of a permanent system exist. This project will pick up these pieces and network them together to create a single umbrella approach (which will in part be supported by the same approach offered by the Ridges to Reef programme).

**Incremental Reasoning.** Thus the project will also pick up natural areas not included in the currently identified PAN system – areas “in between” as it were. This is the sustainable land management component (the PAN's in the main involve near-shore marine areas and their immediate catchment) which will enlarge the terrestrial component of managed terrestrial habitat so that sustainable practices of use are established while protecting natural values such as biodiversity.

### Component 3. Capacity Development for technical support and project facilitation

**Baseline:** The capacity of Palau is similarly fragmented as the natural assets and in most environmental activities there is only the bare minimum of Government staff (or none at all). Many of the activities which would normally be undertaken by Government are assumed by Non-Government Organisations such as the Palau Conservation Society. However, many of the instruments necessary for the wise use and management of the land, biodiversity and near-shore marine areas already exist (strategies, PAN's etc). Human resources have come and gone over the years. What is now needed is the remaining gaps in “infrastructure” to be filled with new protected areas (e.g. areas between PAN's), the associated management structures and instruments and the people to effect implementation of these various elements. These needs must be met in a coordinated, inclusive and managed process including staff who will be employed in the long term. Hence, as above, the intention is build an inclusive national effort with this project and ultimately finance many in the long term with income generated by the Micronesia Challenge.

**Incremental Reasoning.** This project will build the internal capacity of Palau to manage the full range of its forested Protected Area Networks and many areas not captured by the PAN (areas targeted for sustainable land and forest management). Presently the PAN's have been identified and most of the “paperwork” has been done for them now that they are enshrined by legislation and policies. However many of the planned activities in the PAN's have not started and there will be a delay before they can be funded from the Micronesia Challenge Endowment Trust Fund i.e. before it becomes able to produce sufficient profit to fund work/activities on the ground. In the meantime this project will fill this gap over the next four years so that there is a smooth transition to permanent funding from the ETF on established programmes plus ensure integration with related objectives outside of the PAN's.

The two main objectives for this project are to (1) Institutionalize Sustainable Land Management and ecosystem services in Palau, and (2) is to strengthen and improve institutional and management capacity in the development of the protected areas

network. It is anticipated that many of the initiatives stemming from this project will “kick-start” activities which will be maintained in perpetuity by income generated by Palau’s sub-account of the Micronesia Challenge Endowment Trust Fund. This means the MC ETF effectiveness will be greatly enhanced for Palau and accelerate the changes which are urgently required and should dramatically shorten the time to provide outputs/outcomes described in the PIF and the Micronesia Challenge long term objectives.

Palau and her Regional partners have established a marine protocol that has been tested and is in use. Currently the region is establishing a terrestrial protocol that is still in the development stage and will require testing across the region to validate that is replicable and do-able. The protocol covers forests, mangroves, fresh water systems and birds. A gap in both the marine and terrestrial protocols is an inventory on biodiversity. The establishment of permanent monitoring stations that can serve as reference sites are needed. These sites would receive more intense monitoring with a view to monitoring change in biodiversity at a national level. The PABITRA method is being used in Polynesia and may also be considered in Micronesia however there has been no available funding to conduct an interdisciplinary study of biodiversity within targeted hot spots in the archipelago. In addition there is a need to find good indicator species that can serve as early warning signals of a potential significant change. Standardized data acquisition and sharing through a website is needed across the PAN sites (and the sub-region).

The SLM Policy has a Financial Plan that includes state master planning and land use planning which will capture PAN sites and sustainable land and coastal use and the ecosystem services they provide. The State master planning process that the Palau Conservation Society has developed is an excellent start to address management holistically.

## 8. Subproject: PNG: Strengthening the Management Effectiveness of the National System of Protected Areas

**Objective:** *To strengthen national and local capacities to effectively manage the national system of protected areas, and address threats to biodiversity and ecosystem functions in these areas*

**Brief Description:** PNG is a global storehouse of biodiversity. As elsewhere, protected areas constitute an important vehicle for biodiversity conservation; however the national capacity to administer PAs is weak and many sites suffer from neglect--undermining their conservation utility. PNG has committed to establish a “comprehensive, effectively managed and ecologically-representative national system of protected areas”. Four major needs have been identified in order to achieve this policy goal, namely: (i) improve decision-making to guide conservation site action; (ii) better target investments in biodiversity management at the site level; (iii) strengthen traditional conservation measures; and (iv) advance conservation in landscapes. The project is designed to address these needs by strengthening the capacity of the state and communities to manage the existing PA network—improving governance of the PA system while simultaneously strengthening PA management in areas with high biodiversity values. Site interventions will be located to test a landscape approach to conservation—addressing threats within the site and in surrounding landscapes as needed to secure biodiversity values. This conforms with the ridge to reef approach. PNG will share lessons and good practices with other countries participating in the Pacific Ridge to Reef Programme. Funding will be sources from the biodiversity and land degradation focal areas, with the LD funds utilised to marry PA management and landscape management to address landscape level threats such as wildfires.

**Baseline:** PNG’s protected area system is comprised of two types of PA – (1) National Parks and Wildlife Sanctuaries gazetted on freehold land and managed by the State, and (2) Wildlife Management Areas, managed by local communities, on communal land, which have as a specific objective beyond safeguarding biodiversity the sustainable utilisation of its components. The area of National Parks and Wildlife Sanctuaries is relatively small, encompassing 170,000 hectares. However, these areas are critical—as in theory they have a high level of conservation security. They also harbour important biodiversity values. Gazetted WMAs cover an area of 1.7 million hectares. These areas are similarly of high conservation importance. 97 % of land in the country is under customary tenure and WMAs are critical—in providing a paradigm for PA management on such lands where communities dictate land use. Both PA types face growing threats, from encroachment on neighbouring lands leading to growing habitat insularization, from the overharvest of fauna and flora, and from human induced fires.

Direct responsibilities for the management of National Parks and Wildlife Sanctuaries lie with the Department of Environment and Conservation (DEC). DEC is also vested with the management oversight of Wildlife Management Areas. WMAs lie under the jurisdiction of local communities, who must manage the area under a management plan approved by DEC. The capacity of DEC to support its statutory duties for both PA categories is weak. DEC has a small PA management unit, comprising 15 staff, with currently no field cadre. The country has developed a National PA System policy. This is expected to be endorsed in 2013 triggering a review of conservation laws with a view to updating them. The review will clarify the roles and responsibilities of DEC, other public institutions and non-state actors for PA functions—planning, management, monitoring, reporting and enforcement, so as to ensure PAs are effectively delivering their conservation goals. PNG has completed a review of PA coverage against conservation needs and has identified important areas to be targeted for conservation\ (covering 44.6 million hectares). A number of initiatives are currently supporting the expansion of PAs—these include a GEF supported investment to expand PAs in the Owen Stanley Ranges and New Britain, WCS supported work in the Hindenburg, WWF work in the Hunstein Ranges and Western province etc. However, the weak capacity of DEC to manage the system, coupled with weak management of existing PAs compromises the effectiveness and sustainability of these efforts.

The Government is moving to strengthen its capacities to manage the environment, with plans to set up a Conservation and Environmental Protection Authority (CEPA). This will strengthen the capacity of Government to licence and regulate development and improve capacities to manage biodiversity *in situ*, including within PAs.

### **Project Components**

### Component 1: Management capabilities of the PNG State to oversee Protected Area Management

**Incremental reasoning:** The project will strengthen the operational capacity of government to manage the PA system. This will entail the creation of a PA management unit within DEC/CEPA, with adequate staffing and funding to plan, monitor and report on conservation in PAs, and installation of effective and accountable systems to manage staff and finances. In addition, the project will provide support for the development of a decision support system, to effectively deploy staff and funds to address threats to biodiversity at the site level; the development of capabilities to engage the private sector in PA management—developing public-private partnerships, in particular with extractive industries to secure funds and management advice and capacity for PAs, training staff—to provide the full range of PA management functions mandated of DEC/ CEPA, and strengthening budgetary negotiation capacities. A major emphasis will be placed on ensuring cost effectiveness; options for improving the delivery of PA management on-the-ground will be evaluated and operationalised, including the deployment of community rangers, and development of co management systems with communities and local government in National Parks and Wildlife Sanctuaries. The management system will establish standards and guidelines governing PA management functions. Measures to improve the accountability of DEC/ CEPA management for decision making and operations will be introduced. These could include the development of a biennial state of PA systems report, assessing progress in implementing the National PA Systems Policy and compliance with the standards and guidelines for PA management.

### Component 2: Strengthening the capacity of the state and local communities to cooperatively manage protected area sites.

#### **Incremental Reasoning:**

The enforcement capabilities of DEC/ CEPA to address threats within National Parks and Sanctuaries will be strengthened at site level, and in the landscapes in which PAs are located through the deployment of staff (including community rangers) in the field. Resources will be secured both through new budget allocations, and by reconfiguring the use of existing funds. The project will assist CEPA to put in place and implement protocols for intelligence gathering, patrolling, booking offences, prosecuting offences and reporting at the site level. This will necessarily rely on a solid intelligence gathering system within local communities in PA adjacent landscapes. Funds will be allocated (from GEF resources and government co finance) for the rehabilitation of PA infrastructure and equipment—based on a site by site needs assessment to be undertaken during further project preparation. This will include funding, as needed for boundary demarcation, ranger housing, visitor interpretation and other amenities.

With respect to Wildlife Management Areas, the capacity of community Wildlife Management Committees to plan, oversee and manage the WMA landscape will be improved—to ensure that they are effectively implementing agreed management plans. Interventions will strengthen community institutions – so that they are able to plan and manage conservation, and resolve conflicts over the use of resources between groups—with mediation as needed through DEC/ CEPA. A major focus will be placed on engendering the sustainable use of wild resources both for subsistence and artisanal purposes – strengthening community based natural resource management. This will include, support for population surveys, to ensure sustainable offtakes, strengthening traditional management systems (i.e no take, rotational use), monitoring the impacts of use and improving enforcement and monitoring of management. This will focus on non-timber forest products (such as galip nuts) and wildlife—such as crocodile ranching, where sustainability can be assured with effective conservation management and where there are existing markets that can be harnessed. The development of supply chains for produce will be important to provide a utilitarian incentive for conservation.

Interventions will focus on 5-6 sites (details to be determined during preparation of the PIF<sup>10</sup>), selected based on the global significance of the areas, receptivity of landowners and social feasibility of conservation, and contribution of towards the effective management of large landscapes—to secure biodiversity and functional connectivity. Where possible, PNG will make use of regional training opportunities to strengthen staff capacities, undertaken under the auspices of the Pacific Ridge to Reef Programme, thus optimising the use of scarce conservation funds. Interventions will be nested within landscape initiatives aimed at managing forest use (i.e. REDD readiness).

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<sup>10</sup> Tentatively—Bensbach WMA, Baiyer River Wildlife Sanctuary, Sepik Wetlands WMA, Variarata NP and Managalas WMA.

## 9. Sub-project. **Republic of Marshall Islands: Sustaining atoll habitability, livelihoods and ecosystem resilience through integrated management of water, food, biodiversity, coasts, energy and waste**

**Objective:** *Sustaining atoll habitability and socio-economic, community and ecosystem resilience to degrading influences by demonstrating how to integrate the management of water, food, biodiversity, coasts, energy and waste through capacity development, social marketing traditional practices*

### **Project Components**

#### Component 1: Water safety, supply and sanitation

**Baseline:** Activities will include: discussions on and planning and improvement of water and sanitation issues, as well as Integrated Water Resources Management (IWRM) on 5 atolls; drafting of water safety and sanitation plans on 5 atolls; monitoring of water quality at community level; monitoring of water resources and improvement of water catchments on 5 atolls; and awareness raising at national level to improve water conservation and sanitation practices and conducting of water efficiency audits.

**GEF Alternative/Incremental reasoning:** This component builds on GIZ 4-year CCCPIR support, SPC-SOPAC (disaster), IWRM and RMI's PACC with SPREP which began addressing water needs on Majuro, and will also integrate with PACC Plus. The sanitation component has been missing from most national and local planning and improvements. The Reimaanlok system will be used for the implementation of these goals, relying on the input from the local communities and using traditional management practices where possible. Therefore there is need for awareness raising on the water problem and to promote best practices, so the results of better water quality can be achieved.

#### Component 2: Improved atoll food security, production, livelihood benefits, resiliency and quality which will enhance ecosystem services

**Baseline:** Activities include: awareness raising on agro-forestry and implementation of conservation and best practices; and market research and promotion of coconut replanting, inter-cropping, value-adding, coastal planting, shelterbelts, cultivation of salt tolerant and traditional and nutritional crops and medicinal plants; and sustainable water. All of these should lead to increased food security, livelihoods and a sustained agro-forestry system.

**Incremental reasoning:** After water, food security is the RMI's second national priority, in terms of climate change adaptation and day-to-day life. The majority of the people in the RMI live a subsistent lifestyle, even in the urban areas. Additionally, diabetes is common, largely due to the overconsumption of imported sugar and starch. The project aims to resurrect the traditional diet and cultivation practices, such as agro-forestry. This will generate livelihood benefits and greater resilience. Sustainable agriculture, such as agro-forestry, will enhance ecosystem services. Awareness with regards to sustainable agriculture, ecosystem services and best practices will need to be raised at national and local level. This can be done through cooperation with NGOs, CMAC and the Mobile Team. Research will be necessary on subject such as: nursery field-work, coconut replanting and value adding.

#### Component 3: Coastal and atoll management to secure natural and human assets

**Baseline:** Activities include: introduction of best practices through community resource management plans in 5 atolls; on 5 atolls protection of 20% of the coastal forests and 30% of the reefs, supported by community plans, legal ordinances and national legislation, protected area networks and financing plans, as well as protecting key species such as the Ratak Pigeon; awareness raising, local networks and training on best practices for integrated resource management, addressing key issues, such as biodiversity protection, energy and climate change.

**Incremental reasoning:** As a result of loss of traditional knowledge and practices, the coastal areas of the RMI have experienced overexploitation of reef and lagoon resources, including reef fish, sharks, turtles, groupers and sea cucumbers. Additionally, IUU fishing is also a severe threat for RMI's marine resources. With the help of the Reimaanlok system and the CMAC approach and through collaboration with the Ministry of Internal Affairs, the Mobile Team, WUTMI, best practices in community resource management can be adopted. The project aims to protect 30% of the reefs and 20% of the coastal

forests on five atolls. This will be achieved through the generation of protected areas and PANs, supported by a community plan, local ordinances, national legislation and a financial plan. Finally, key issues in biodiversity protection, energy and climate change can be addressed through awareness raising and training by the College of the Marshall Islands.

Component 4: Reducing greenhouse gas emissions and pollution from fuel and fuel waste through RE technology investment and development of a low carbon, energy efficient, clean and sustainable road and marine transportation system

**Baseline:** Activities include: increasing the national and household energy security, investment; draft a sustainable road and marine transport policy and regulatory framework; draft a plan for implementation of a sustainable transport modality demonstration; reduce the GHG emissions; increase the number of clean vehicles, vessels and introduce fuel technology initiatives; conduct awareness raising and capacity building.

**Incremental reasoning:** aims to mitigate climate change through the introduction and promotion of renewable energy (RE) technologies and promotion to invest in them. Shifting to renewable energy will lower RMI's dependency on imported fuels, but will also bring in new innovative technologies such as solar electricity, which will largely raise the nation's quality of life. Furthermore, rising fuel prices and lack of livelihoods and income have severely cut boat ownership and transportation frequency between remote atolls and the main commercial centers. Therefore, there is need to develop a low carbon, energy efficient, clean and sustainable road and marine transportation system, with a focus on the resurgence in construction and use of traditional Marshallese sailing canoes. All of this will be achieved under the umbrella of an updated energy policy and action plan which stimulates investments in RE technologies, such as RO solar water makers, biogas units, clean and efficient biomass stoves, the making of canoes and the use of coconut bio-diesel. Policies that deal with the importation of vehicles will have to be established, including minimum performance, safety, emission and discharge standards, maintenance as well as policies on fuel taxes. The market should be stimulated to introduce sustainable transportation technologies. This will lead to decreased GHG emissions and waste. Additionally, awareness on these issues should be raised and local people should be trained on the reduction of GHG and sustainable transport methods. Furthermore, the project aims to draft updates of national plans, such as the NISAP.

Component 5: Sustainable land/forest management

**Baseline:** Draft national statutes or legal frameworks on SLM, SFM and food security on at least 5 atolls; and introduce programmes for cross-sectoral awareness raising for all relevant stakeholders on SLN and ecosystem management.

**Incremental reasoning:** component 5 of the project aims to make significant contribution to sequestering carbon through improved management of existing forests. Almost 70% of RMI's land cover is forested, with almost half of the total land area under coconut plantations and agro-forestry schemes. The total estimated carbon benefit of the project is an additional sequestration of a number of tons of CO<sub>2</sub> per year, thanks to the improved management of the existing forest resources and controlling the spreading of IAS. Furthermore the establishment of policies and improved management frameworks will assist in safeguarding and sustainably managing RMI's growing carbon stock, with the view of increasing the socio-economic and climate change mitigation and adaptation.

## 10. Sub-project. **Tonga: Implementing a ‘Ridge-to-Reef’ approach to protect biodiversity, ecosystem functions, and adapt to and mitigate climate change in the Kingdom of Tonga**

**Objective:** *To implement activities to arrest and reverse land and coastal resource degradation, to support biodiversity conservation, to ensure freshwater security for people of Tonga, and assist them in preparing for climate change impacts through the implementation of an integrated ‘Ridge-to-Reef’ approach. This proposal responds directly to requests in the Tonga Strategic Development Framework (2011-2013), the Tonga Climate Change Policy (2006), and the Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management 2010-2015 (JNAP).*

### **Project Components**

#### Component 1: Conservation of Marine and Terrestrial Biodiversity

**Baseline:** This component will focus on improving management in existing protected areas and establishing new PAs where biodiversity surveys indicate typical Tongan and Pacific flora and fauna. The few remaining areas of native forest will be conserved and expanded with new tree planting. Special efforts will be made to raise awareness of conservation amongst Tongan communities by rehabilitating degraded farmlands and introducing the concept of payments for ecosystem services. The target for forest rehabilitation is on Tongatapu and ‘Eua. Marine conservation will be strengthened by replanting mangroves and protecting seagrass beds and coral reefs in Special Marine Areas, with the development of new PAs established to conserve threatened species in Faguata Lagoon and covering offshore coral islands. Peer-to-peer exchanges will occur with Pacific islanders experienced with the Locally Managed Marine Areas (LMMAs) system and with implementing Integrated Coastal Management (ICM).

**Incremental reasoning:** Tonga has little experience in implementing holistic, integrated management of natural resources; therefore the GEF funding will be used to introduce Ridge-to-Reef concepts of IWRM and ICM through training within all Components and to increase capacity. Funding will ensure that all government sectors, donor organisations, NGOs and women and youth groups cooperate to develop a shared vision of biodiversity conservation and implement this through direct action in revegetating damaged farmlands and forests that are currently beyond the capacity of the government. A cooperative approach will be applied to developing protected areas, both existing and new, and in evaluating the economic benefits of protected areas and biodiversity with the view towards implementing a system of payments for ecosystem services.

#### Component 2: Conservation, Restoration and Enhancement of Carbon Stocks through Sustainable Forestry

**Baseline:** The project will focus on extensive tree planting to achieve two objectives: to rehabilitate degraded forests and farmlands with a mix of native, timber, fruit and mangrove trees; and to increase climate change mitigation by sequestering CO<sub>2</sub> in these new ‘green’ and ‘blue’ forests. This will include planting of commercial trees such as sandalwood and native hardwoods. It will be essential to secure community awareness and involvement in integrated landscape management practices. Therefore there will be parallel biophysical, demographic and socioeconomic assessments of the communities involved and awareness raising activities of sustainable management activities within their ecosystems. In addition to ‘green’ carbon, there will be active ‘blue’ carbon projects with extensive re-planting of mangroves in Faguata Lagoon and protection of seagrass beds off Tongatapu. Government staff will be trained in the use of international forest management schemes e.g. MRV, REDD and FLEG. Inter-sectoral co-management will be a project feature with stakeholders functioning through the Joint National Action Plan Task Force Secretariat coordinated within the Ministry of Environment and Climate Change. Several pilot sites in degraded forests and farm lands to demonstrate SFM and ICM to other Tongan communities.

**Incremental reasoning:** Tonga has few options for climate change mitigation, thus these GEF funds will be applied to broad-scale replanting of damaged forests and farmlands with a range of species with emphasis on valuable native tree species and those of economic importance such as sandalwood and fruit trees, to assist in alternative livelihood generation. Attention will also be applied towards assisting in creating environments to conserve biodiversity. Funds will also be applied towards building capacity through R2R principles for whole of ecosystem management and involvement of communities in

conservation, through demonstration farms. Some activities will be applied on outer islands which are beyond the logistic capacity of the existing government sectors.

#### Component 3: Reduce Island Vulnerability to Climate Change

**Baseline:** The low lying islands of Tonga are particularly susceptible to the effects of climate change. This component will introduce sustainable adaptation methods into the Ha'apai group to protect low coastlines with both hard structures and soft revegetation, plus ensure that the communities have ongoing supplies of freshwater for household use and agriculture for protection against periodic droughts. Revegetating coastal areas will be critical towards stabilizing shorelines and protecting underground water supplies. The objective is to demonstrate that communities on Pacific islands are capable of managing their coastal resources in the face of climate change, plus build resilience to other serious risk factors such as cyclones and tsunamis.

**Incremental Reasoning:** The GEF funding assistance will be used as a response to the Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management, in which the people of Tonga recognized the need to prepare communities for impending climate change impacts, but noted that they lacked the resources in capacity and funding to develop significant demonstration projects. Funds will also be employed to take the lessons learned on Ha'apai to other islands in Tonga and make the lessons available for other Pacific islands.

#### Component 4: Capacity building in Management of Water Resources (IWRM focus)

**Baseline:** Best practice demonstrations of effective and appropriate freshwater and waste management from throughout the Pacific will be introduced in 3 islands to improve the management of freshwater resources, the implement effective control of pollution, and improve the management of coastal resources through planting of coastal and mangrove forests.

**Incremental Reasoning:** The GEF funding assistance will be used to bring the lessons learned from the GEF Funded Integrated Water Resources Management project and lessons learned from the PEMSEA managed projects in southeast and east Asia to Tonga as part of broader capacity building.

#### Component 5: Knowledge Management

**Baseline:** This component will focus on strengthening existing data and information systems on biodiversity conservation, forest management, land management best practices, marine ecosystem management, and climate change threats and other potential risks. A special focus will be on integrating existing data and information into more user-friendly access facilities.

**Incremental Reasoning:** Tonga has developed a preliminary data and information system, but lack the resources and capacity to fully develop this. The GEF funds will assist Tonga and participants in the Joint National Action Plan Task Force further develop the data and information system to include many more data and graphic features and to make the system available to all sectors of government and community.



## 11. Sub-project. Tuvalu: Implementing a ‘Ridge-to-Reef’ approach to protect biodiversity and ecosystem functions, and adapt to climate change in Tuvalu

**Objective:** *To conserve the natural environment and biodiversity resources of Tuvalu by rehabilitating damaged ecosystems. This responds directly to the Tuvalu National Strategic Action Plan for Climate Change and Disaster Risk Management (NSAP) with goals of developing a Tuvaluan Locally Managed Marine Areas system to effectively conserve at least 15% of the coastal area by 2018 with LMMA principles recognized in policy and legislation. To achieve these objectives in many of the nine islands, activities will focus on assessing resource status, revegetating damaged island and coastal ‘forests’, and improving or developing LMMAs governed by the Kaupule (Island Councils) to assist the recovery of degraded corals and breeding fish populations. The project will implement a ‘Ridge-to-Reef’ approach in government and local communities, and emphasize lessons learned in the regional Integrated Water Resources Management program.*

### Project Components

#### Component 1: Conservation of Island and Marine Biodiversity:

**Baseline:** The component will strengthen current protected areas and create new ones by assessing status in the 11 current areas established by the Kaupule (Island Councils) on 9 widely distant islands and atolls of Tuvalu and use the lessons learned to improve their management and develop consistent national policy and regulations on protected area management and use. The nationally developed Funafuti Conservation Area is the model for this process with the aim (within NBSAP 2011) of having at least 15% of Tuvalu under protected area status by 2015. Initial biodiversity, ecological and socioeconomic assessments will be repeated after 2 and 4 years to measure management effectiveness and applied to expand some of protected areas through a ridge-to-reef approach to include adjacent land and fish spawning aggregation sites. Noxious invasive species will be cleared from 3 islands before declaring them as protected areas. A Biodiversity Information System focused on indigenous and endemic species, and protected areas will be developed along with wide ranging capacity building in R2R concepts.

**GEF Alternative/Incremental reasoning:** The GEF funds will be used to harmonize management arrangements and regulations in protected areas that have been established in a haphazard manner and incorporate these into national policy. LMMA have been established independently by the Island Councils but the Tuvalu government has lacked the capacity and logistics to assess their status and develop best practice. Moreover the few staff in the Department of Environment lack the logistic resources to visit these widely separated islands. With a Biodiversity Information System, the government, communities and NGOs will be able to make better decisions on land use and management. The 15% target is beyond reach without outside assistance.

#### Component 2: Sustainable Land Management (and Climate Change Mitigation)

**Baseline:** This component will rehabilitate degraded lands, including land in protected areas and also address NBSAP to use such activities to improve food security and traditional practices by working with the Kaupule, NGOs and womens’ organizations to introduce drought- and salt-tolerant fruit and vegetable crops on 5 islands. The second objective is a contribution to ‘green’ and ‘blue’ CO<sub>2</sub> sequestration. This agroforestry initiative will replant degraded island and coastal forests with suitable hardwood and fruit tree species and, where appropriate, mangrove trees planted in 5 islands with suitable habitats. A particular focus will be on replanting old coconut plantations with more productive varieties.

**GEF Alternative/Incremental reasoning:** The GEF funds will be used to rehabilitate large areas of degraded coastal and inland forests and, where requested by communities, repair degraded and abandoned taro ‘pulaka’ pits that are threatened by saltwater intrusion. The gradual degradation of these lands has resulted in a shifted baseline, with much of the population unaware of the original forest cover of these islands, and of the potential to grow swamp taro as a reliable food source. Many of the coconut palms are very tall and with reduced productivity; replacing these at whole island scale is a large and long-term project that requires additional funds. Finally Tuvalu is losing capacity to grow local foods; therefore a focus will be on

providing suitable vegetable and fruit varieties to improve food security, which is decreasing with over-fishing and climate change threats.

#### Component 3: Climate Change Mitigation

**Baseline:** This special sub-component will set up three demonstration sites on government buildings or schools or churches to illustrate the effective use of solar generation combined with sustainable water use options using water tanks and composting toilets. Water management and energy generation and conservation methods will be combined at these demonstration sites to illustrate local-scale actions that can prepare Tuvaluan communities for climate change.

**GEF Alternative/Incremental reasoning:** The GEF funding is directly focused on developing demonstration sites with the latest, but small-scale, technology for both energy and water sectors that will be appropriate for Pacific island communities. Some of these technologies have been applied in Tuvalu, but there has been no attempt to bring them together at the same sites to demonstrate the complete package.

#### Component 4: Healthy Marine and Coastal Ecosystems

**Baseline:** This component will link the regional Integrated Water Resources Management program with the other components by emphasizing water management and introducing ridge-to-reef training. This recognizes that there have been many assessments of water management, thus the emphasis will be on: direct implementation of a drought action plan similar to the one developed in Kiribati; modifying the water components of the building code to be compatible with the socioeconomic conditions in Tuvalu; and conducting an economic feasibility study of options for centralized water reticulation and wastewater treatment systems.

**GEF Alternative/Incremental Reasoning:** It is essential to capitalize on the GEF Funded Integrated Water Resources Management project. Therefore GEF funding assistance will bring the lessons learned from other Pacific countries and also from the GEF funded PEMSEA managed projects in southeast and east Asia to Tuvalu and integrate these into R2R broader capacity building.

#### Component 5: Governance and Coordination.

**Baseline:** A major objective of the R2R program will be to provide training for government and community people in Integrated Coastal Management and Integrated Water Resources Management to raise awareness of a whole of ecosystem approach to natural resource management. The component will focus on developing community leader training packages specifically for the small island situation of Tuvalu and supporting government and NGO staff for post-graduate certificate level training. The National Climate Change Advisory Board will be constituted as the project coordination committee to ensure links to government with broad community representation, including women and NGOs.

**Incremental Reasoning:** The GEF funds will be used to build understanding and capacity in the outer islands of Tuvalu into the concepts of holistic and integrated management: the R2R approach. Management of natural resources is predominantly through a sectoral approach such that external funds are needed to bring all sectors of governmental and the community together to share the management of natural resources; especially on the outer islands where there is limited government capacity and the Kaupule have minimal understanding of the potential impacts of climate change and current adaptation mechanisms.

#### Component 6: Knowledge Management.

**Baseline:** This component will focus on strengthening existing data and information systems on biodiversity conservation, land management best practices, marine ecosystem management, and climate change threats and other potential risks. A special focus will be to integrate existing data and information in more user-friendly access mechanisms and make these available for communities in the Tuvaluan language.

**Incremental Reasoning:** The GEF funds will assist Tuvalu improve their preliminary data and information system (developed through another development project). However Tuvalu lacks the resources and capacity to fully develop this and make these features readily available to all sectors of government and community.

**12. Sub-project. Regional MFA (IW, SCCF): Ridge to Reef: Testing the Integration of Water, Land, Forest, Biodiversity & Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries**

**Objective:** *To test the mainstreaming of ‘ridge-to-reef’ (R2R), climate resilient approaches to integrated land, water, forest and coastal management in the PICs through strategic planning, capacity building and piloted local actions to sustain livelihoods and preserve ecosystem services*

**Project Components**

Component 1: National Demonstrations to Support R2R ICM/IWRM Approaches for Island Resilience and Sustainability:

**Baseline:** At the National Level PacSIDS agencies of Agriculture, Forestry, Fisheries, Environment and Water are primarily focused on developing and sustaining their burgeoning populations. PacSIDS are heavily reliant on regional organizations such as SPC/SOPAC and NGOs for specific programmes addressing stressors in each of these sectors. SPC programmes are funded through a mix of annual core funding sourced from donors such as Australia, New Zealand and European Union (EC) and project funding from a wide variety of donors. SPC integrates and coordinates its efforts at a national level through agreed Joint Country Strategy Programmes (JCSP) periodically developed, revised and agreed with PacSIDS. Among these baseline programs are The **Disaster Reduction Programme** (providing PacSIDS with technical and policy support to strengthen disaster risk management practices in collaboration with a range of regional and international development partners and donors as well as the **Ocean and Islands Programme**, which works across a broad range of marine, coastal and island resource use, vulnerability and climate change adaptation issues. It provides a range of specialist technical capacities, skills and tools in support of PacSIDS.

**GEF Alternative/Incremental reasoning:** 14 national pilot projects would be supported reflecting IWRM plan implementation, catalyzing local community action, providing best practice examples, and building institutional linkages for integrated land, water, forest and coastal management; strengthened institutional relationships between national and community governance structures, and community leaders and local government officials networked via community-leader forum. Planning methodologies would be developed for selection of priority island sites to scale-up integrated land, water and coastal management within a PacSIDS ICM framework. Donor and national co-financing would facilitate investments to begin implementing completed national IWRM plans. Successful pilot projects testing innovative solutions involving linking ICM and IWRM and CC adaptation are implemented and documented. National diagnostic analyses for ICM conducted for prioritizing and scaling up key ICM / IWRM reforms. Multi-stakeholder leader roundtable networks established for strengthened ‘community to cabinet’ ICM/IWRM to support action in capitals.

Component 2: Island-based Investments in Human Capital and Knowledge to Strengthen National and Local Capacities for Ridge to Reef ICM/IWRM approaches, incorporating CC adaptation

**Baseline:** The SPC/GIZ ‘Coping with climate change in the Pacific Island Region (CCPIR)’ Programme is strengthening the capacities of Pacific member countries and regional organizations to cope with the impacts of climate change with a focus on land (and coast) based natural resources such as agriculture, forestry and land use, fisheries, tourism, energy and education. Whilst the **EDF 10 Pacific Natural Disaster Facility** is strengthening institutional arrangements for disaster risk management to achieve integration of DRM and Climate Change Adaptation (CCA) arrangements into central and key line ministries in PacSIDS. The programme has both national and regional components and works in 14 PacSIDS. The Annual Pacific Disaster Platform and Regional Climate and Water Consultations provides an ideal vehicle for high level integration of strategies and National level cooperation. UNDP will provide the equivalent of \$250,000 in Water Resources Management courses, training materials, and databases available via the UNDP Cap-Net program that can support project implementation including capacity building, strategic planning processes, legislative reform and mainstreaming of climate and gender into IWRM.

**GEF Alternative/Incremental reasoning:** National and local capacity for ICM and IWRM implementation built to enable best practice in integrated land, water, forest and coastal management and CC adaptation at the same time, strengthened national and local capacity for ICM and IWRM implementation to enable best practice in integrated land, water, forest and coastal management; consolidation and sharing of PIC knowledge on climate variability, coastal area planning in DRM, integrating 'blue forest' and coastal livelihoods. Human resource needs for ICM will be benchmarked, planned, and incentives for human resource capacity retention prioritized by intergovernmental fora. Incentive structures for retention of local 'Ridge to Reef' expertise and inter-governmental dialogue on human resource needs for ICM/IWRM initiated

#### Component 3: Mainstreaming Ridge to Reef ICM/IWRM Approaches into National Development Frameworks

**Baseline:** SPC programs will provide a platform along with donor capacity to provide an increment over simple sector programs to mainstream ICM/IW/adaptation approaches into national development and sector frameworks.

**GEF Alternative/Incremental reasoning:** The project will assist as 14 PICs develop National recommendations for coastal policy, legal and budgetary reforms for ICM/IWRM for integration of land, water, forest, coastal management and CC adaptation with options for harmonization of governance frameworks. Capacity for integrated approaches to be enhanced and institutionalized through 14 national Inter-Ministry Committees (IMCs); national diagnostic analyses for ICM conducted to prioritize key ICM investments in 14 PICs and reflected in 'State of the Coasts' reports; national and regional strategic action frameworks for ICM endorsed by cabinets of 14 PICs. National Inter-ministerial agreements and strategic action frameworks for 14 PICs on integration of land, water, forest and coastal management and capacity building in development of national ICM/IWRM reforms and investment plans endorsed by leaders. Additionally, coordinated approaches for R2R integrated land, water, forest and coastal management and for CC adaptation achieved in 14 PICs. Physical, natural, human and social capital built to strengthen island resilience to current and emerging anthropogenic threats and climate extremes

#### Component 4: Regional and National 'Ridge to Reef' Indicators for Reporting, Monitoring, Adaptive Management and Knowledge Management

**Baseline:** The expected baseline would involve single agency, single sector reporting and monitoring for individual GEF focal areas and donor projects. The counterparts are too few in numbers for all countries to do this, so simplified and integrated annual reporting of results and tracking will be tested. Success would mean possibly global application for future integrated projects among GEF focal areas as well as for R2R approaches in other countries.

**GEF Alternative/Incremental reasoning:** The project will foster formulation and adoption of integrated and simplified annual results reporting framework for the multi-focal projects in the R2R programme both nationally and regionally for tracking tool and communication purposes. This will test simplified counterpart reporting for GEF results in an integrated fashion. National and regional platforms for managing information and sharing of best practices and lessons learned in R2R will be established.

#### Component 5. Ridge-to-Reef Regional and National STAR Project Coordination

**Baseline:** SOPAC as well as donor development worker positions will be utilized as part of the project to provide effective coordination of the programme national STAR projects while at the same time being complemented by the regional project components. The baseline would not have coordination.

**GEF Alternative/Incremental reasoning:** The project will deliver a well-functioning overall program coordination unit with alignment of development worker positions contributing to coordinated effort among national R2R projects in year 1. Technical, operational, reporting and monitoring support provided to national R2R projects to facilitate timely delivery of overall program goals. Assistance provided to participating countries in the Pacific R2R Network with harmonized reporting, monitoring and other regional and national capacity building modules. Effective national pilot project coordination will be sought, including national STAR projects where national integration is chosen; physical, natural, human and social capital built to strengthen island resilience to current and emerging anthropogenic threats and climate extremes.

### **13. Sub-project. Samoa - Economy-wide integration of CC Adaptation and DRM/DRR to reduce climate vulnerability of communities in Samoa**

The increasing frequency of climate and other geomorphological induced hazards (including the 2009 tsunami and cyclone Evan in 2012) makes a compelling case for greater integration of climate change adaptation and DRR/DRM policies into national and sectoral development strategies and responses. In this context, this Government of Samoa led LDCF financed initiative seeks to establish an economy-wide approach to efficiently integrate adaptation and DRR/DRM into national development planning and programming. It is the Government's desire to use this initiative to enhance the resilience of communities to CC and natural resources. It is aligned with Samoa's NAPA priorities, the Samoa National Action Plan for Disaster Risk Management 2011-2016, and the Post-Disaster Needs Assessment (January 2013). LDCF financing, through a strategic combination of technical assistance and investments on hard adaptation measures (pilot demonstration), will be used to achieve the following key results: i) Strategic integration of climate change adaptation and DRM in national policy frameworks and development planning; and ii) enhance resilience of communities as first responders of climate change – induced hazards.

Following the recommendations of the recently concluded Climate Public Expenditure and Institutional Review (CPEIR) of Samoa, the new Climate Resilience Strategy for Samoa, and the National Environment Management Strategy. LDCF financing will be targeted at three levels of interventions in the first component of this initiative. These include : i) integration of CC-A and CC/DRR/DRM responses into key policies/sectors of the economy; ii) strengthened institutional coordination to enhance operational efficiencies and coordinated responses to increase the impact of CCA interventions; iii) public finance management including the development of climate change fiscal framework to optimize CC funds and streamline village-level climate change financing.

The second component of this initiative will focus on mobilizing communities (especially women, youth groups and CBO's across Samoa) to adopt integrated adaptation and DRR/DRM responses, in order to better prepare and manage likely risks on both natural and physical assets. LDCF resources will be targeted on community level interventions including: i) development and implementation of Community Disaster and Climate Risk Management (CDCRM) and District Resilience plans; ii) physical and natural protection of household and community assets; and iii) non-physical livelihoods assets developed with a sustainable and resilient approach in pursuit of green path development in Samoa.

Lastly, LDCF financing will be used to develop a large range of knowledge products including case studies and multimedia products. The systematic dissemination of these products will be facilitated through developing a project communication strategy, harnessing appropriate local, national, and regional media and means. To achieve a larger outreach of the above products and exchange of best practices and lessons learned, the activities under this Component will feed into a broader knowledge management structure contained in the "Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest, and Coastal Management to preserve ecosystem services, store carbon, improve climate resilience, and sustain livelihoods" programme.

The LDCF resources will compliment a number of ongoing and planned baseline development projects including i) National Recovery Plan (\$157 Million) and ii) EU-supported Water Sector Support Policy Programme (\$84 Million). The PIF for this initiative is expected to be submitted for Council Approval in June 2013.

## Annex C

### Program Relevance to National Strategies and Plans under Relevant Conventions

The R2R program has been designed to complement the implementation of relevant national priorities including the CBD National Biodiversity Strategy & Action Plan (NBSAP), UNFCCC NAPA, UNFCCC National Communications, REDD+ Policies, UNCCD National Action Plans, National Sustainable Development Strategies and other documents. For each country, relevance of this program to the implementation of such strategies is explained below.

#### 2.1 Cook Islands:

Relevant to the program is the Cook Island's NBSAP (2002) Strategic Goal C: "Conserve important ecosystems through a system of protected areas with regulated and monitored activities", particularly the following two actions: develop a programme to select areas to establish a national system of community-based protected areas to protect important terrestrial ecosystems; develop a programme to select areas to establish a national system of community-based protected areas to protect important reef and lagoon ecosystems. The project will also contribute to Strategic Goal F: Make biodiversity information more readily available to all stakeholders and interested people and Strategic Goal H: Secure long-term financial sustainability for all biodiversity related activities and programmes. The NBSAP also highlighted the need to mainstream biodiversity conservation into important economic sectors to mitigate threats to biodiversity. It has noted, under Strategic Goal G, the priority "Integrate biodiversity into national and sectoral legislation, policies, plans and programmes". This project's Component 2 is directly aligned with this NBSAP priority. The project will directly support the CI in the achievements of the following Aichi Targets; especially those under Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use.

The key gaps and constraints identified in the SNC (2011) that could be addressed through this project relates to: 1) Greater integration of climate change in all planning and implementation including socio-economic programs and projects; 2) Enforcement of climate adaptation and mitigation relevant policy and regulations with the capacity and capability of national human resources; and 3) Participatory approaches to address land issues which impede sustainable development with due consideration of traditional tenure systems at national and local levels.

The project will directly support the implementation of the Cook Islands' National Sustainable Development Plan (NSDP, 2011-2015). The Plan has identified 'ecological sustainability' as one of its eight key priorities, which include six key objectives: 1. The use of all our natural resources is managed well to ensure their sustainability. 2. Our scarce and degraded natural resources are effectively monitored and restored; 3. The pollution of air, water and land resources is managed so that impacts are minimized and community and ecosystem health are not adversely affected. 4. Irreversible loss and degradation of biodiversity (marine, terrestrial, aquatic ecosystems) is avoided; 5. Our actions to protect and manage our ecosystems and natural resources will include Climate Change Adaptation and emissions reduction measures. Key strategies that are envisaged under this Plan (that this project will directly contribute towards) include 1. Improve the Management and Quality of our Water Resources through an Integrated Approach; 5. Develop and Implement Interventions to Ensure that Land Use is Sustainable; 4. Implement an Ecosystem Approach to the Management of Marine Resources; 6. Protect our Biodiversity and Ecosystems. The NSDP's Priority Area 6 is on Ecological Sustainability. Here the plan calls for Strengthening Natural Resource Management and Climate Change Mitigation in the Cook Islands. This project is directly aligned with the following key actions under Priority Area 6: Improve the conservation and management of biodiversity, to increase resilience to the impacts of climate change (through Component 1 of this project); Strengthen and build resilience in the fisheries sector, ensuring a higher resilience to the impacts of climate (through Component 1 of this project); Promote agricultural Livelihood resilience and food security, and resilience to the impacts of climate change, (through Component 2 of this project). Furthermore, the project is strongly aligned with the Cook Islands Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Reduction, especially Strategy 2, Actions 8 and 9: Strengthen and build resilience in the fisheries sector, ensuring a higher resilience to the impacts of climate (Action 8) and Improve the conservation and management of biodiversity, to increase resilience to the impacts of climate change (Action 9).

#### 2.2 Federated States of Micronesia

The NBSAP (2002) identified 11 strategic themes, namely: 1) Ecosystem Management, which involves the protection, conservation and sustainable management of FSM's marine, freshwater and terrestrial ecosystems; 2) Species Management, which involves the protection and sustainable use of native, endemic, threatened and traditionally important species; 3) Genetic Resource Use, which involves making accessible FSM's genetic resources for utilization and the equal sharing of derived benefits amongst stakeholders; 4) Agro-biodiversity, which works towards conserving and sustainably using FSM's resources for future food security; 5) Ecological Sustainable Industry Development, which looks at meeting the needs of the population while sustaining the resources for future generation; 6) Bio-security, which involves the protection of FSM's native biodiversity from alien invasive species through the use of border control, quarantine and eradication programmes; 7) Waste Management, which involves the effective management of human-generated waste to prevent or minimize environmental degradation, pollution and loss of the nation's biodiversity; 8) Human Resources & Institutional Development, which involves programmes to improve technical knowledge, skills and capabilities to conserve, preserve and sustainably utilize, manage and develop all FSM's biodiversity; 9) Resource Owners, which includes the full involvement of traditional resource owners and communities in the protection, conservation, preservation and sustainable use of FSM's biodiversity; 10) Mainstreaming Biodiversity, which looks at integrating biodiversity conservation considerations into all economic and social activities; and 11) Financial Resources, which details actions to provide long-term financial sustainability of all conservation and biodiversity related activities from local, regional and international sources.

The FSM Strategic Development Plan (SDP 2004-2023) dedicates an entire sector (Sector 6) to sustainable environmental management in recognition of the critical importance of natural environment to the health and prosperity of current and future generations of Micronesians. Most importantly, FSM recognizes that the environment sector shall support the protection of and achieve sustainable development of its natural resources. This project would contribute to meeting specific strategic goals of the SDP namely: the mainstreaming of environmental considerations, including climate change, into national policy and planning as well as in all economic development activities; making FSM's genetic resources accessible for utilization and ensuring benefits derived are equitably shared amongst stakeholders; and managing and protecting natural resources/protect, conserve, and sustainably managing a full [functional] representation of the FSM's marine, freshwater, and terrestrial ecosystems.

### **2.3 Fiji**

The Implementation Framework 2010-2014 for the NBSAP (2007) identified seven key thematic areas: 1) Forest conversion management, which looks at improving coordination of Government policies, legislations and management guidelines, promoting research and awareness on forests and terrestrial resources, improving land-use practices through enforcement with well-monitored land-use policy and logging codes; 2) Invasive alien species, which aims to identify and document invasive species and use the information to develop a plan that would prohibit the introduction of new invasive alien species and eradicate existing species identified; 3) In-shore fisheries, which looks at promoting sustainable aquaculture for restocking, promoting biodiversity tourism, maintaining existing protected areas, designing new ecologically relevant inshore MPAs, strengthening leadership, management and governance of natural resources, promoting education and awareness in environmental science, improving collaboration and coordination between relevant government agencies, and reforming fisheries legislation and management institutions, and reducing demand for marine natural resources and biodiversity products; 4) Coastal development, which looks at strengthening national guidelines for inter-sectoral coastal development, developing and promoting partnership between government agencies and stakeholders towards sustainable tourism development, inclusion of non-tourism development activities, strengthening of national mangrove management plan; 5) Species conservation, which looks at increasing access to expertise and increasing efforts in qualitative research, reducing illegal trade of endangered and threatened species, increasing government contribution to conservation budgets, improving collaboration between relevant line ministries, improving knowledge management and sharing amongst stakeholders; 6) Protected areas, which looks at expanding national protected area network, accounting for community engagement, sustainably managed under good governance systems, and improving legal basis for protected areas; and 7) Inland waters, which looks at increasing protection, preservation and restoration of important wetland resources and ecosystem services to conserve biodiversity and maintain livelihoods.

While updating its First National Communication (2006) through the Second National Communication (in-progress), Fiji developed a REDD+ Policy (2011) and Climate Change Policy (2012) to advance its commitment on climate change adaptation and mitigation. Fiji's REDD+ Policy (2011) will support the global efforts to reduce greenhouse gas emissions, relevant domestic legislation and policies, and Fiji's efforts to conserve its natural forests, valuable ecosystem services and its biodiversity. Relevant to this project is its implementation programme geared towards; 1) Retaining and enhancing the carbon in its forested landscapes; and 2) Achieving sector goals such as transition to sustainable forest management, reducing forest loss from expansion of agricultural lands and other land use change, protecting indigenous forest areas of high cultural, biodiversity and ecosystem services value. Fiji's National Climate Change Policy 2012 was developed as a result of the review of its National Climate Change Policy Framework 2007. The policy, which aims to improve coordination among sectors and provide direction on national position and priorities, comprises eight main objectives of which four are relevant to this project: 1) Mainstreaming of climate change into all national and sector policy and planning processes; 2) Awareness raising for improved understanding of climate change related issues across all sectors and at all levels; 3) Integration of adaptation and disaster risk management strategies; and 4) Mitigation approaches for reducing greenhouse gas emissions and increasing carbon sequestration and storage of greenhouse gases.

Fiji's Strategic priorities of the Fiji Government are detailed in the Roadmap for Democracy and Sustainable Socio-Economic Development 2009- 2014 (RDSSED) with the overriding goal of building 'A Better Fiji For All', including the environmental aspect. 'Ensuring Environmental Sustainability' is the 7th MDG provides a framework for integrating the principles of Sustainable Development into national policies and also includes ensuring availability of safe drinking water and improving sanitation. Relevant Pacific programs that Fiji are a signatory to include the Pacific Plan (2004) with the Strategic Objective number 5 involving initiatives being promoted for the first 3 years in sustainable development, fisheries, forestry, coastal waters, waste management, energy, freshwater management, biodiversity and climate change. Other relevant Pacific programmes include Action Strategy for Nature Conservation in the Pacific Island Region (2002), Pacific Island Roundtable for Nature Conservation (2002) and the Island Biodiversity Programme of Work (2006). Fiji is also involved with Coral Reef Initiatives in the Pacific (CRISP), Locally Managed Marine Area (LMMA), Pacific Invasive Learning network (PILN) and Pacific Biodiversity Information Forum (PIBF).

## **2.4 Kiribati**

Kiribati's NBSAP (2006) has the following goals: improvement of informal education and public awareness at local community levels, which would form the basis for improved decision-making and participatory approach in biodiversity protection, sustainable use and management of land and terrestrial resources that are in-line with traditional and customary land and marine tenure systems, biological resources shall be enhanced, used and managed to maintain biological diversity in the short and medium term; available data and information on national biodiversity shall be expanded and made available to policy makers and the public; and minimize activities that pollute and threaten biodiversity.

Ten adaptation measures identified in the NAPA (2007) are: 1) Water resource adaptation project; 2) Simple well improvement, which aims to reduce water-borne diseases; 3) Coastal zone management for adaptation; 4) Strengthening climate change information and monitoring through establishment of a central office to access and share information, improving scientific skills and capacities to implement UNFCCC obligations; 5) Project management institutional strengthening for NAPA, which aims to operationalize external support through Ministerial Operational Plans (MOPs) and integrate these into national development planning and budgetary management systems; 6) Upgrading of meteorological services; 7) Agricultural food crop development; 8) Coral monitoring, restoration and stock enhancement; 9) Upgrading of coastal defenses and causeways to protect public infrastructure and community assets from encroaching coastal erosion, improve accessibility within atolls and minimize potential risks to assets; and 10) Enabling effective participation.

While updating its First National Communication (1999) through the Second National Communication (in-progress), Kiribati developed a National Framework on Climate Change (2013) that aims to strengthen capacities for: 1) Mitigation; 2) Integration of climate change and climate change adaptation into national planning and institutional capacity; 3) External financial and technical assistance; 4) Population and resettlement; 5) Governance and services; and 6) Survivability and self-reliance. Most relevant to this project are the first two areas on mitigation and integration of climate change into national planning and institutional capacity. The project will also support the policy goals articulated in the Kiribati Integrated



Environment Policy (2012) namely: 1) Climate change; 2) Island biodiversity and conservation management; 3) Resource management and 4) Environmental governance.

The project is aligned with the Kiribati Development Plan (2012-2015) Key Priority Area 4 on Environment and would assist with addressing the limited national capacity to adapt and respond to existing and future adverse impacts of global climate change.

## **2.5 Nauru**

In promoting the conservation and management of the country's biodiversity, the project is consistent with Government of Nauru's priorities as set out in the draft NBSAP (2010) of which the main aim is to conserve and sustainably use Nauru's endemic species and equally secure the future of other species, native or introduced, that are vital to agriculture, forestry and fisheries. This aim is made in light of the extensive degradation of 70% of Nauru's land due to phosphate mining.

The draft National Action Programme (NAP, 2012) to support the *UN Convention to Combat Desertification* recognizes the need to strengthen Nauru's systems, institutions and individual capacities to address land degradation in Nauru. The draft NAP is proposing a framework that will build human capacity through addressing issues (such as food security, land and water) that affect Nauru's natural resources and strengthen community resilience.

Nauru's National Sustainable Development Strategy (2005-2025), which regards environmental considerations as an integral cross-cutting link to national development and identifies the need to sustainably use and manage the environment and natural resources for present and future generation. The project will also contribute to Nauru's National Water, Sanitation & Hygiene Policy and associated implementation plan that seeks to address widespread community concerns about the availability and quality of freshwater on the island, during periods of ENSO-related droughts and from pollution of groundwater due to household sanitation systems. Key national policies and plans are also supported by this project, including Nauru's National Fisheries and Marine Resources Authority (NFMRA) Corporate Plan, which envisages the protection of coastal fisheries through appropriate legislation. Finally, by strengthening the country's marine ecosystem, this project will build on the findings of the Pacific Regional Oceanic and Coastal Fisheries Development Programme (PROCFish) and will be a key component of the Government's strategy to establish and implement the Nauru Locally Managed Marine Area, and will assist Nauru to meet its obligations under the UN Convention on Biological Diversity to effectively conserve at least 15% of its total coastline by 2020 as a means to contribute to the sustainable livelihoods for its people and to contribute to protection of the world's biodiversity.

## **2.6 Niue**

Niue's NBSAP (2001) identified seven themes: 1) Conservation and sustainable management of terrestrial habitats focusing on forests and cleared lands for agricultural purposes; 2) Conservation of terrestrial species such as birds, flying fox, coconut and other land crabs; 3) Coastal, inshore and marine biodiversity including inshore coral reefs and off-shore fisheries; 4) Governance including enactment of legislation, development of policies and institutional mechanisms and capacity; 5) Waste management and water resources including improvement of waste management, development of recycling programmes, ensuring safe and sustainable freshwater supply, management of mineral extraction and marine pollution; 6) Alien and invasive species such as prevention of new invasive species, reduction and elimination of pest species, and building capacity to manage threats of invasive species; and 7) Education and Public awareness.

Four of the six broad objectives in Niue's Climate Change Policy (2009) are of direct relevance to this project: 1) Awareness raising through development and implementation of communications strategy, public awareness campaigns, partnerships with NGOs and private sector, and integration into school curriculum; 2) Adaptation through identification of vulnerable areas and sectors, enhancement of local capacity, promoting use of appropriate technology, traditional knowledge and practices and strengthen linkages to disaster preparedness; 3) Promoting mitigation actions through agriculture and forestry; and 4) Governance and mainstreaming through integration in national sector plans and strategies and financial resource allocation processes.

The Niue National Strategic Plan (NNSP, 2009-2013) considers Environment as one of its development pillars, with the goal for “sustainable use and management of Niue’s natural resources and environment for present and future generations”. This project would contribute towards mitigation of adverse effects of climate change; conservation of biodiversity and ecosystems (including marine, freshwater and terrestrial); and increase in public awareness of environment and sustainable development principles.

## **2.7 Palau**

Palau’s NBSAP (2008) identified eight strategic themes for conserving its biodiversity: 1) Protected/managed areas that looks at establishing a network of adequately funded effectively managed protected areas that includes representative areas of all ecosystems and habitats in Palau; 2) Species protection with the goal of maintaining functional populations of native and endemic species and their habitats; 3) Bio-security – invasive species and bio-safety that looks at protection from invasive species and modified organisms; 4) Sharing benefits of genetic resources that looks at empowering resource owners and communities to implement sustainable resource management and conservation practices and sharing the benefits with full legal protection; 5) Sustainable economic development that looks at facilitating long-term development that are community-driven and owned; 6) Prevent or minimize waste that looks at reducing, re-using or recycling 65% of all wastes by 2012; 7) Agricultural biodiversity that looks at effectively conserving agro-biodiversity for present and future use; and 8) Mainstreaming of biodiversity conservation that involves integration into all aspects of government and community planning, development and operations.

Relevant to this project is its support to the implementation of: 1) Palau’s Natural Heritage Reserve System Act 1991, which outlines the criteria for terrestrial and marine reserves; 2) the Palau Forest Management Plan 1994, which provides direction for long-term sustainable management of forests including specific guidelines for preservation; and 3) the Mangrove Management Plan 1999, which is a framework for sustainable management of mangrove forests.

Palau’s commitment to strengthen the Environmental Management Policy Framework, as per Palau’s Mid-Term Development Strategy (MTDS, 2009-2014), will be supported through this project. The project would assist with mainstreaming of environmental considerations in the planning process; incorporate environmental management requirements and targets in state plans, sector plans (agriculture, tourism, infrastructure, energy etc.) and development strategies.

## **2.8 Papua New Guinea**

The NBSAP (2007) identified six main goals: 1) To conserve, sustainably use and manage PNG’s biodiversity; 2) To strengthen and promote institutional and human capacity building for biodiversity conservation, management and sustainable use; 3) To strengthen partnership and promote coordination for conserving biodiversity; 4) To strengthen existing protected areas and ensure that protected areas for terrestrial species and marine species are increased to 10% by 2010 and 2012 respectively; 5) Ensure a fair and equitable sharing of benefits arising out of genetic and ecosystem resources; and 6) Promote and strengthen research of the country’s biological diversity and the sustainable development of the country’s biological resources.

Following the submission of its First National Communication (2000), and whilst compiling its Second National Communication (in-progress), PNG developed an Interim Action Plan for Climate Compatible Development (2010, subject to national consultation) that will guide further analyses on mitigation and adaptation, access and utilization of international funding including necessary legal and policy interventions. All three areas are relevant for support through this project: 1) Climate change mitigation and low carbon growth through agricultural and afforestation/reforestation programmes; 2) Strengthening climate resilience through adaptation; and 3) Policy, regulatory and legislative changes.

In-line with PNG’s Mid-Term Development Plan (MTDP, 2011-2015), the project will also support PNG’s focus to ensure environmental sustainability.

## **2.9 Republic of Marshall Islands**

RMI identified five goals in its NBSAP (2000) for conserving biodiversity: 1) Conservation of biodiversity and biological resources which involves the activation of traditional conservation sites, imposition of fines and penalties for destruction of resources, and advocating for crop/tree planting programmes; 2) Protection of the marine biodiversity that focuses on training and building capacity towards resource conservation, and sustainable fishing practices; 3) Traditional culture and practices that looks at reviving and application of traditional skills and knowledge; 4) People and biodiversity that involves public awareness programmes; 5) Biotechnology and biodiversity that involves conservation of genetic diversity and protection of intellectual property rights; and 6) Bio-safety and biodiversity which involves the establishment of legislation, regulatory frameworks and systems.

Since submission of its First National Communication in 2000, RMI drafted its Climate Change Roadmap (2010) and of relevance to this project is its purpose to enhance coordination and coherence, and inform the development and adoption of a national policy.

RMI's Strategic Development Plan Framework (2003-2018) lists its commitment to address climate change through appropriate adaptation and mitigation measures as well as environmental degradation through biodiversity conservation practices. The various components of this project would contribute to achieving these commitments.

### **2.10 Samoa**

The eight themes in Samoa's NBSAP (2001) are: 1) Mainstreaming biodiversity, that involves the integration into national, sectoral and cross-sectoral plans, policies and programmes; 2) Ecosystem management with the goal of increasing the percentage of Samoa's protected and conserved areas; 3) Species management, which involves the conservation of native and other important species and development of mechanisms for their sustainable use; 4) Community empowerment to protect, conserve and sustainably use their resources; 5) Access and benefit sharing from use of genetic resources, which involves capacity building of traditional communities in the co-ordination and implementation of conservation and appropriate biodiversity programmes; 6) Bio-security, with the goal to protect Samoa's native biodiversity from impacts of alien species through effective border control, effective quarantine and eradication programmes; 7) Agro-biodiversity, which looks at its contribution to national development and preservation of traditional knowledge, innovation and practices; 8) Financial resources and mechanisms, which looks at securing long-term financial sustainability of all conservation and biodiversity related programmes.

The nine immediate and urgent project-based adaptation activities listed in the NAPA (2005) are: 1) Securing community water resources; 2) Reforestation, rehabilitation and community forestry fire prevention; 3) Climate health cooperation programme; 4) Climate early warning system through implementation of effective early warning systems and emergency response measures to climate and extreme events; 5) Agriculture and food security sustainability; 6) Zoning and strategic management planning; 7) Implement coastal infrastructure management plans for highly vulnerable districts; 8) Establishing conservation programmes in highly vulnerable marine and terrestrial areas of communities; and 9) Sustainable tourism adaptation.

The Strategy for the Development of Samoa (SDS, 2012-2016) is committed to environmental sustainability and improving resilience to climate change and disasters (Priority Area 4: Key Outcomes 13 and 14). This project would support specific strategic areas on sustainable management of natural resources, protection of critical ecosystems and species, and promoting good land-use management practices.

### **2.11 Solomon Islands**

The twelve themes for conserving biodiversity listed in the NBSAP (2010) are: 1) Mainstreaming biodiversity, which works towards ensuring the commitment of government and stakeholders by integrating biodiversity conservation into national legislation, sectoral plans, policies and programs; 2) Species conservation, which aims to protect unique plants and animal species; 3) Protected area system through the development of appropriate legislation and protected area design; 4) Management of invasive species and genetically modified organism through legislation, monitoring, research and awareness; 5) Benefit sharing and access to genetic resources through appropriate legislation, ordinances and access protocols; 6) Financial resources, which looks at putting in place sustainable financial mechanisms for effective and long-term

management of biodiversity conservation; 7) Human resources and capacity building through stakeholder empowerment programmes; 8) Research, monitoring and information-sharing to better inform resource owners and the public; 9) Agro-biodiversity through research and inventory, application of traditional knowledge and sustainable land use practices; 10) addressing climate change issues that affect biodiversity through legislation, policies, awareness raising, research and capacity building; 11) Waste management through legislation, awareness and monitoring; and 12) promoting alternative energy use that will reduce impact on biodiversity through research, legislation, policies and awareness programmes.

The five highly ranked immediate and urgent project-based priorities in the NAPA (2008) are: 1) Agriculture and food security, which aims to increase resilience of food production and enhance food security to the impacts of climate change and sea-level rise; 2) Water supply and sanitation that looks at increasing the resilience of water resources management to the impacts of climate change and sea level rise; 3) Human settlement, where capacity for managing the impacts of climate change and sea-level rise will be improved; 4) Human health, which aims at increasing the capacity of health professionals to address adverse impacts of climate change on human health; 5) Education, awareness and information on climate change to improve information and knowledge sharing.

The project will complement the initial National UN-REDD Programme in the Solomon Islands which is laying out the basis for REDD+ readiness through six main areas of work: 1) supporting broad-based, multi-stakeholder consultations; 2) analysis of forest resource data; 3) developing a REDD+ roadmap; 4) awareness raising; 5) supporting the process for ensuring free, prior and informed consent (FPIC) of Indigenous Peoples and other forest-dependent communities; and 6) developing capacities to formulate its reference emission levels (RELs) and systems for forest measurement, reporting and verification (MRV).

## **2.12 Tonga**

The Tongan NBSAP (2006) promotes the conservation and management of the country's biodiversity. The Plan outlined the threats to their major natural resources arising mostly through unsustainable expansion of agriculture resulting in a loss of habitats for native fauna, extinction of rare flora species, disruption of ecosystem functions and services, pollution of freshwater resources, and the destruction or alteration of large areas of forest and woodlands, including mangroves. There has been over-exploitation of forest, mangrove and fishery resources as well as unsustainable and unplanned coastal modification and dumping of solid wastes. Tonga has specifically stated that it intends including biodiversity into national and local development and poverty reduction strategies and planning processes; on maintaining production and consumption of natural resources within safe ecological limits; ensuring that fish and invertebrate stocks are managed and harvested sustainably; and conserving coastal and marine areas through effectively and equitably managed systems of protected areas, including replacing mangrove forests. The eight themes in the NBSAP are: 1) Forest ecosystems; 2) Marine ecosystems; 3) Species conservation; 4) Agro-biodiversity; 5) Local communities and civil society; 6) Access and benefit sharing; 7) Mainstreaming biodiversity conservation; and 8) Financial resources and mechanisms.

The project also supports the Decision 11/COP.10 of the UNCCD at its 9<sup>th</sup> Plenary Meeting in October 2011 that "encourages eligible Parties, taking into account the cross-sectoral nature of land degradation, to use existing potential to harness synergies across the Global Environment Facility focal areas in order further to reinforce the importance of sustainable land management for integrating environment and developmental aspirations globally".

Of relevance to this project is its ability to support conclusions of the SNC namely for increasing forest conservation areas, promoting sustainable forest management schemes, promoting awareness and tree-planting programmes, promoting efficient and alternative use of wood resources, and development of land use policies and regulations.

The Tonga Strategic Development Framework (2011-2013) addresses the Millennium Development Goal 7 (MDG 7) that seeks to ensure environmental sustainability and is administered through JNAP Task Force Secretariat. The ethos of the TSDF is to expressly recognize and support the value of Tongan cultural traditions within a developing world. The TSDF mandates the implementation of Environmental Impact Assessments (EIAs) to ensure the sustainable use of natural resources and strengthen national capacity for environmental management while raising awareness in Tongan communities on the need to conserve these limited resources and minimize waste. The TSDF emphasizes the threats to Tonga through global climate

change and natural hazards, as was illustrated with the 2009 tsunami that affected the northern islands of Tonga. This project will include capacity building in assessing vulnerability and risks with the development of a risk warning system. The Tonga Climate Change Policy (2006) was the precursor to the Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management 2010-2015 (JNAP) which is the major Tongan government policy strategy guiding this project. This plan is focused on: good governance for climate change adaptation and disaster risk management; improving technical capacity in Tonga and raising awareness of the potential problems posed by climate change; determining the vulnerability of Tongan islands to the risks inherent in climate change impacts and other potential disasters, especially from tsunamis, and in preparing communities for these threats; seeking Tongan-sensitive solutions towards sustainable energy production and use; and ensuring that all sectors of the Tongan community are working in cooperative partnerships.

### 2.13 Tuvalu

The eight themes in the NBSAP (2011) are: 1) Climate change and disaster risk management with the goal of building resilience of biodiversity to manage, control and reduce the risks and impacts of climate change and natural disasters; 2) application of traditional knowledge, cultural practices and indigenous property rights in the conservation of Tuvalu's biodiversity; 3) Conservation of species, ecosystems and genetic diversity; 4) Community empowerment, involvement, awareness, understanding and ownership; 5) Sustainable use of natural resources through improving the use and management of existing conservation areas and establishment of more conservation areas; 6) Trade, bio-security and food security through encouraging the production and consumption of local food; 7) Waste and pollution management through integration of biodiversity into existing waste management policies, strategies and plans; and 8) Management of invasive species through management plans and capacity development programmes.

Tuvalu had outlined seven immediate and urgent project-based adaptation priorities in the NAPA (2007) for: 1) Coastal protection through increasing resilience of coastal areas and settlements; 2) Agricultural protection, through the use of salt-tolerant species; 3) Water access, in particular during frequent water shortages; 4) Health improvement, through the control of vector borne/climate sensitive diseases and access to quality potable water; 5) Fisheries conservation of highly vulnerable near-shore marine ecosystems; 6) promoting alternative Fisheries resources and coral reef ecosystem productivity; and 7) Disaster preparedness and response through strengthened community capacities.

Whilst working on its Second National Communications report (in-progress), the Government of Tuvalu developed the Tuvalu National Strategic Action Plan for Climate Change and Disaster Risk Management (NSAP). Of relevance to this project are priority areas on: 1) Strengthening adaptation actions to address current and future vulnerabilities; 2) Improving understanding and application of climate change data, information and site specific impacts assessment to inform adaptation and disaster risk reduction programmes; and 3) Ensuring energy security and a low carbon future for Tuvalu.

The National Sustainable Development Strategy (2005-2025) regards environmental considerations as an integral cross-cutting link to national development and identifies the need to sustainably use and manage the environment and natural resources for present and future generation. The major strategy guiding action in this project is the Tuvalu National Strategic Action Plan for Climate Change and Disaster Risk Management 2012-2016 (NSAP, 2012) to support the *UN Convention to Combat Desertification* recognizes the need to strengthen Tuvalu's systems, institutions and individual capacities to address land degradation in Tuvalu. The NSAP 2012 is the last of a series of action plans with the first the *Te Kakeega II* the National Strategy for Sustainable Development 2005-2015, followed by *Te Kaniya*, National Climate Change Policy (2011) a Cross-Cutting Policy and Disaster Risk Management (2012-2021). NSAP 2012 was coordinated through the Ministry of Foreign Affairs, Trade, Tourism, Environment and Labour is proposing a framework that will build human capacity through addressing issues (such as food security, land and water) that affect Tuvalu's natural resources and strengthen community resilience. The project will also contribute to Tuvalu's National Water, Sanitation & Hygiene Policy and associated implementation plan that seeks to address widespread community concerns about the availability and quality of freshwater on the island, during periods of ENSO-related droughts and from pollution of groundwater due to household sanitation systems. Key national policies and plans are also supported by this project, including Tuvalu's National Fishing Corporation of Tuvalu (NAFICOT) which envisages the protection of coastal fisheries through an appropriate legislation. Finally, by strengthening the country's marine ecosystem, this project will build on the findings of the Pacific Regional Oceanic and Coastal Fisheries Development Programme (PROC Fish) and will be a key component of the Government's strategy to establish and

implement the Tuvalu Locally Managed Marine Area, and will assist Tuvalu to meet its obligations under the UN Convention on Biological Diversity to effectively conserve at least 15% of its total coastline by 2020 as a means to contribute to the sustainable livelihoods for its people and to contribute to protection of the world's biodiversity.

#### **2.14 Vanuatu**

The NBSAP highlights six key objectives for the effective management of biodiversity: 1) Ensure sustainable management and conservation of Vanuatu's biodiversity; 2) Develop appropriate policy, planning and legal mechanisms for the management of biodiversity; 3) Improve knowledge about biodiversity; 4) Improve capacity of national, provincial, NGO and community organizations to manage biodiversity; 5) Increase local awareness of the importance and value of biodiversity; and 6) Foster community participation in the management and conservation of biodiversity.

The main short-term and urgent adaptation priorities in Vanuatu (2009) are: 1) Agriculture and food security, with the goal of enhancing food security and resilience of the economy to the adverse effects of climate change; 2) Sustainable tourism, that looks at enhancing adaptation to climate change in the tourism sector; 3) Community-based marine resource management programmes, through capacity building and alignment of both modern and traditional practices; 4) Sustainable forestry management, which aims to mainstream climate change into its policies and practices; and 5) Integrated water resource management to enhance resilience of watershed.

The Government of Vanuatu is drafting its Second National Communications report (in-progress) and has commenced preparatory work on furthering commitment to sustainable forestry management under the REDD+ Initiative. Vanuatu has undertaken legal analyses and is working towards developing its policy and legislative framework, which could be supported through this project.

The Vanuatu Priorities and Action Agenda (PAA, 2006-2015) considers the Environment and Primary Sector Development as one of key priority areas. Relevant to this project are the strategies on: 1) Implementation of the Environmental Management and Conservation Act and the regulation of related activities; and 2) Encouraging the development of protected areas.

## Annex D

### The Ridge-to-Reef Concept in the Context of the Pacific Island Countries

#### 1. Overview

The Ridge-to-Reef (R2R) management of ecosystems describes a comprehensive approach to managing all activities within a 'catchment' or 'watershed' and out to the sea to ensure natural resource sustainability and biodiversity; it is often undertaken in the context of precautionary principle. It is also referred to as Hilltops to Ocean (H2O), White Water to Blue Water, Integrated Catchment and Coastal Management (ICCM), Integrated River Basin Management (IRBM) and several other terms. While the terms are relatively new, the concepts of holistic management have been practiced throughout islands Pacific for hundreds to thousands of years. The R2R approach will also include Ecosystem Based Management (EBM) which has been developed to recognize that the nature and functioning of whole ecosystems should be managed together, rather than focusing on one aspect/sector e.g. a focus on forestry, or agriculture, or fisheries.

Most Pacific Island states are predominantly coastal where the distances from the highest point - 'the Ridge' to where the coral reefs meet the open ocean 'the Reef' may range from several kilometers to less than 100 meters. Thus management of the whole catchment area from R2R is essential to conserve natural resources which provide livelihoods for Pacific peoples. R2R management seeks to overcome disputes arising from sectoral (Departments of Agriculture, Forestry, Fisheries, Lands, Environment etc.) and inter-governmental (different national and local government agencies) management so as to manage all activities within a complete ecosystem with the involvement of all the critical stakeholders.

The R2R approach relies on managing the activities of people and their use of natural resources within 'natural boundaries'. In the Pacific this includes mountains and hills with forests, coastal plains and forests, rivers and streams, shorelines including mangrove forests, and marine resources of seagrass beds, coral reefs and associated fisheries. In the case of high islands, the area managed is one or several catchment areas which are defined by the direction of rainwater flow after it falls on uplands and through streams and rivers to the ocean. In the case of low lying coral islands, an R2R approach should seek to manage a large part or a whole island, possibly running from the lagoon reefs, across the island and out to the ocean. This R2R program will involve all of these possible scenarios from large islands with complex catchment areas and large rivers, smaller volcanic and uplifted islands, to coral islands resting only a few meters above sea level.

To be effective, R2R management must identify the key stakeholders within a catchment area and involve them in the management. In many countries, the list of stakeholders can be exceedingly long, thus it will be necessary to select the key stakeholders for active involvement in R2R management, and recognize the interests of the less-critical stakeholders. Management can fail if too many or too few of the stakeholders are involved. R2R management approaches must be transparent and consultative, such that the stakeholders take 'ownership' of the process and seek to cooperate with other stakeholders and government management agencies to achieve the best outcomes. This approach will require a detailed process of awareness raising through direct instruction via methods appropriate for communities; it is essential that sufficient time is allocated to this process as it cannot be rushed.

#### 2. What is 'Ridge to Reef' Management

**R2R is Broad Based:** The approach is to achieve sustainable management of terrestrial, coastal and marine resources by reducing or eliminating damaging activities and promoting rehabilitating and sustaining activities by resource users who live in or visit the catchment area. This is the basis for this proposed program: the integrated management of complete catchment areas or the whole island for smaller mountainous and coral islands. These sites are intended as best practice demonstrations for the rest of the country. The R2R concept encapsulates both Integrated Coastal Management (ICM) and Integrated Water Resources Management (IWRM) to cover all activities within the selected area and conserve biodiversity. In this program, both ICM and IWRM will be applied towards reducing, and where possible eliminating, the flow of sediments, excess nutrients, pesticides, including persistent organic pollutants (POPs), heavy metals and solid wastes being delivered from the land through streams and into the ocean.

**Integrated Water Resources Management:** IWRM is specifically focused on managing water in catchment areas, to cover all physical, social and economic aspects to ensure that water use and treatment is balanced between human use and health, environmental processes, and economic development. It employs a balanced approach to minimize conflict and ensure optimal, equitable and sustainable use, through the active involvement of all stakeholders in the planning and management of water. IWRM uses a range of water treatment methods such as collecting rainwater and treating it for domestic use to treating human sewage and other wastes such as from farms (especially piggeries) to reduce downstream pollution of stream and coral reef ecosystems.

**Integrated Coastal Management:** ICM covers all other aspects of the R2R concept, specifically the management of human activities within catchment areas or on small islands. It seeks to maintain ecosystem services and where necessary, repair damaged systems for both human and environmental benefits. ICM in this proposed program will seek to replant forests and remove damaging invasive plants, protect hillsides from erosion, repair damaged agricultural lands, replant mangrove forests, implement protected areas, especially along the coasts and over coral reefs, and above all seek to raise awareness within communities and government of the need to sustainably manage natural resources. ICM and IWRM will work synergistically to support the health of ecosystems and human populations on Pacific islands.

**Ecosystem Based Management:** EBM is a more recent development in natural resource management in recognition of errors made in attempting to manage just one of several components of an area, with resultant flow on effects of damage. EBM is defined as an integrated approach to management that considers the entire ecosystem, including humans.

### 3. R2R Management in the Pacific

**Water and the Pacific:** Water is the most important ‘currency’ in the Pacific and this deeply embedded in the culture and thinking of Pacific Island peoples. The first peoples successfully travelled over water to start reaching these islands about 3000 years ago. They continued to make exploratory long sea voyages seeking more suitable islands until recently. Settlement on islands was principally dependent on adequate supplies of potable water. Droughts have decimated island populations in the past; and the potential for longer, more severe droughts will threaten more populations in the future. Currently many water supplies are unusable due to pollution from sewage, POPs and agricultural wastes. Increased heavy rain events and storm surges are predicted with climate change in the near future. And finally, sea level rise threatens the very existence of many towns and some nations in the Pacific. This program seeks to protect and maintain existing supplies of fresh water and where necessary undertake rehabilitation of water supply systems. This will be through implementing a R2R approach including ICM and IWRM applied in ‘catchments’. This program will build on three particularly successful GEF International Waters projects: the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) managed by PEMSEA in 11 East Asian countries; the Implementing Sustainable Water Resource and Wastewater Management in Pacific Island Countries (IWRM I) project managed through UNDP and SPC-SOPAC in 14 countries; and the project Integrating Watershed and Coastal Area Management (IWCAM) in the Small Island Developing States of the Caribbean.

**Island Management in the Pacific:** Three different governance models for making decisions on the management of islands and coastal resources have been recognized in the Pacific:

- Pacific traditional management to conserve limited resources was developed by island peoples over hundreds of years prior to the period of colonization and spread of Western management concepts. Natural resource management was holistic in communities which ‘owned’ both land and sea resources. Decisions on resource use were made, predominantly by male leaders and elders, after lengthy discussion, such that a traditional chief would announce what land could be cultivated, what trees could be removed, and to establish ‘tabu’ areas where fishing was prohibited;
- Colonial sectoral management was introduced within the last 150 years, whereby separate national government departments were made responsible for expanding forestry, fisheries and development. These often resulted in conflicts with local communities and also environment departments which were concerned about conserving natural resources for the future. Resource management was seen as serving broader national economic interests, and sometimes based on scientific advice. Traditional community control over natural resource management was lost through the introduction of the ‘commons’ concept into marine resource access, thereby negating ownership and enforcement over resources traditionally ‘owned’ by communities; and



- 'Pacific Way' Management now merges the best features of the two models above, whereby considerable authority is returned to the community for co-management of natural resources with national governments, academic institutions and NGOs in a legislative and supporting role. This newer 'Pacific Way' seeks to involve all stakeholders in the community in decision-making, including women and youth, who were often excluded from traditional management. This is the most appropriate mechanism for R2R management.

This proposed program will adopt a 'Pacific Way' approach to ensure that there is gender and age equity in consultations and decision making.

**Pacific Island Biogeography:** Three broad categories of islands can be recognized in the Pacific; each of these categories will involve variations on the way R2R is implemented and the areas under management. Most Pacific countries are archipelagic states with many islands of different sizes and frequently different structure and geological history, usually spread over many hundreds of kilometers of ocean. There are however two 'single island' countries in Nauru and Niue which also constitute special cases. However for this R2R program, three broad categories are defined:

- There are a few larger islands where there are distinct catchments covering large areas and containing distinct and complex river systems. This is the case in the two large islands of Fiji and the main part of Papua New Guinea. Both Fiji and PNG have many islands in the second category and also some coral atolls and uplifted coral islands. Large river basins create special problems in that R2R management requires consultation with stakeholders who may be unaware of the others stakeholders either far upstream or downstream;
- Many smaller mountainous islands with short localised catchments of temporary, but rapid flowing, streams of only a few hundred meters length to the ocean. The following countries are predominantly within this category; Cook Islands; FS Micronesia; Palau; Samoa; Tonga; and Vanuatu. There are also smaller islands in Fiji and PNG that come into this category; and
- Low lying, uplifted coral islands and smaller atoll islands with virtually no streams, such that rainwater percolates through porous limestone and sand into groundwater aquifers and then out to the ocean or lagoon. The atoll islands and many of the uplifted coral platforms are rarely more than 3 m above the ocean, and hence are particularly threatened by predicted sea level rise. Management of natural resources under a R2R process will require a modification of the standard approaches as there are no clearly defined catchment areas and no rivers or streams. Instead water usually percolates through the porous limestone rock and sand into underground aquifers. This situation applies in: Kiribati; Nauru; Niue; R Marshall Islands; and Tuvalu. The two 'single island' countries, Nauru and Niue, are less threatened by sea level rise.

#### 4. Critical Stakeholders in R2R Management

**The Critical Stakeholders:** An essential and initial task of R2R management is to identify the critical stakeholders and determine how to involve them in management and determine how they will be affected by any changes in resource use. These stakeholders will include: all levels of the relevant governments (national, provincial, local and traditional) and government agencies; communities of farmers, fishers and local businesses and traders; relevant groups of men, women and youth; religious leaders and groups; local and international NGOs; schools and teachers; and in some cases, international agencies of the UN and donor nations etc. Often not all stakeholders can be involved as there may be too many however the critical ones need to be identified and the issues relating to the remainder be considered in any future planning. It is essential that the process be transparent, be accompanied by good information flow and awareness raising, and conducted at a pace that permits the stakeholders to be comfortable with actions with sufficient time to discuss all issues. A frequent failure of R2R management has been through attempts to speed up the process beyond the capacity of the communities to cope.

**Socioeconomics of Stakeholders:** Many of the activities in R2R management will involve changes in the social and economic circumstances for many of the stakeholders. For example, the designation of no-take marine protected areas will deprive some fishers and gleaners of areas where they normally operate, and intended improvements in fisheries through higher reproduction and growth of resources may take several years to eventuate. Thus consideration should be given to providing alternative livelihood options for these affected groups. In large catchment areas, requests to reduce sediment, nutrient and pesticide pollution from upstream communities to benefit distant communities on the coast may need trade-offs

and peer-to-peer exchanges to ensure there is full understanding of causes and effects of ecosystem damage with distant communities sharing the costs of resource use changes. All projects within this R2R program will take these aspects into consideration and seek to ensure gender and age equality in decision making and allocation of resources.

**Legal Considerations of R2R:** Management of catchments over larger areas and distances may involve crossing jurisdictional boundaries, where different laws may apply. In the case of R2R in the Pacific, there are no transboundary issues between countries, however in the large islands, management interventions will need to take place over two or more local government boundaries. This will only be applicable in Fiji and PNG, and will be considered in planning.

## **5. Global and Pacific Significance of R2R Management**

**Global Significance of R2R:** Single resource or sector management is largely regarded as inappropriate, and there are many examples of failure; probably the clearest examples are through attempts at fisheries management. Whole ecosystem or R2R management has clearly demonstrated success, particularly through projects funded through the GEF in East Asia, central Europe and recently in the island states of the Caribbean and now in the Pacific. R2R management explicitly accommodates many of the GEF focal area strategies, especially Biodiversity, Land Degradation, Climate Change, International Waters and Sustainable Forest Management. R2R management also recognizes the need to control pollution from complex chemical compounds e.g. linkages to GEF POPs focal area.

**Pacific Significance of R2R:** When national governments in the Pacific apply R2R management approaches, they are required to open up consultation with all sectors of the society. R2R management requires the formation of inter-departmental committees with the inclusion of community representatives to investigate the problems and solutions. The process then involves NGOs and community based organizations in assisting communities to implement solutions. There are many anecdotes of poor communication between different departments of Pacific countries over the management of the same area; sometimes these people meet to discuss common problems while attending international meetings out of the country. The implementation of R2R management in the Pacific will improve communication and cooperation within government and also with other sectors of the community; in effect the promotion and application of R2R is a re-introduction of traditional whole of island management that Pacific islanders practiced for hundreds of years.