

Regional REDD+ Readiness Support Strategy for the Pacific

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Executive Summary

This report serves as reference material to support discussions among Pacific Island Countries (PICs) regarding approaches to REDD+ readiness throughout the Pacific region. It addresses a need, particularly among the region's smaller countries, for assistance with basic decision-making on whether and how to engage in REDD+ and REDD+ readiness activities. The report proposes a regional approach to REDD+ readiness (as opposed to REDD+ implementation) in the Pacific, which addresses the varying interests of PICs.

PICs have some of the highest levels of forest cover in the world, as a proportion of land area, the highest levels of customary land and forest tenure and high rates of endemism among forest species. While Melanesian countries have begun to explore the development of REDD+ strategies, the other PICs, by virtue of their small forest areas, have neither attracted the interest of external investors in REDD+, nor begun to explore the relevance of REDD+ to their national climate change and development strategies.

This report argues that the process of REDD+ readiness may deliver benefits to all PICs, when the potential to implement some components of this process at a regional level is considered. Such a Pacific Regional REDD+ Readiness Support Strategy (hereafter called the Regional Strategy) would overcome the resource and capacity constraints faced by some of the smaller countries.

The report identifies a hierarchy of benefits from this Regional Strategy:

- 1. Engagement in regional REDD+ policy debate**
- 2. Practical 'no-regret' improvements to the forest sector**
- 3. Access to financial support for the forest sector**
- 4. Decision-making process for REDD+**
- 5. Preparation for national REDD+ programme**

The Regional Strategy outlined in this report is envisaged not as a UN-REDD Programme, but rather as a framework that may guide the interventions of a range of supporting agencies. To be a valuable, effective policy tool, it must account for and build on the existing investments and interventions that contribute to REDD+ readiness and broader forest sector development.

To complement the ongoing initiatives of PICs, Pacific regional institutions and development agencies, the report proposes two broad outcomes for the Regional Strategy:

- 1. Regional Outcome**
- 2. National-level Pilot Outcome**

1. Regional Outcome

All countries in the region have a full understanding of the potential benefits and risks associated with REDD+, and are able to make informed decisions about engagement in REDD+ and REDD+ readiness activities.

This outcome will be achieved via three regional outputs:

- 1. Regional REDD+ readiness roadmap:** The Secretariat of the Pacific Community (SPC) and the German International Cooperation (GIZ) have already initiated the process of developing a Regional REDD+ Readiness Roadmap. UN-REDD and other support agencies can assist this process by ensuring participation of the range of regional stakeholders; all PICs, forest and non-forest sectors and civil society representatives.
- 2. Broad-based multi-stakeholder regional REDD+ information platform:** This platform will include the development of a network of REDD+ experts and interested parties and an online information service where users can share experiences, data and ideas.
- 3. Decision-making support programme for REDD+:** This assistance will include knowledge and skills development on REDD+ and other climate-focused land-use planning tools, as well as the development of tools for financial and economic analyses of REDD+ readiness options and updated geographic information.

2. National-level REDD+ Pilot Outcome

REDD+ readiness is achieved as part of the overall national low carbon and climate resilience strategy in one mid-sized PIC; supported by effective, inclusive and participatory management processes.

This outcome will also be achieved by three outputs, as follows:

- 1. National REDD+ working group and readiness roadmap:** A broad-based, multi-stakeholder working group will be established to govern the REDD+ readiness process. The initial task of the working group will be to formulate a roadmap for REDD+ readiness, incorporating the relevant forest sector development projects and land-use planning processes, particularly those which are in line with the National Adaptation Plan of Action (NAPA).
- 2. Improved coordination between forestry and other land use sectors:** The national REDD+ strategy will be underpinned by an updated forest inventory and data management system and implemented with the active participation of local communities. Improved community forest management capacities and participatory protected area management will contribute to the achievement of REDD+ readiness.
- 3. Development of forest management options:** To develop a coherent REDD+ strategy, the collection of accurate data and needs assessment analyses for forest governance and management reform will be carried out. This will include opportunity cost analysis, vegetation change analysis, with an emphasis on mangroves and invasive species, and research into the practical actions that may be taken under a REDD+ strategy.

Key messages

- **REDD+ is an important element of a portfolio of policy tools** to integrate climate change issues into forestry and land-use strategies in the Pacific.
- **A Pacific Regional REDD+ Readiness Support Strategy should be developed** through a broad-based, multi-stakeholder approach which engages all PICs, a range of sectors (forestry, energy, environment, land-use planning and finance), customary landowners, civil society organisations, non-government organisations and the private sector.
- **All countries in the Pacific region may benefit from a Regional REDD+ Readiness Support Strategy.** It does not necessarily follow that all countries would benefit from a full national REDD+ readiness process or from REDD+ implementation.
- **Investments in REDD+ readiness in the Pacific should be considered as one component of a portfolio of financial mechanisms,** in order to avoid creating unrealistic expectations of benefits and a high workload on PIC governments. When implemented together, these mechanisms constitute a financially viable programme of activities.
- **Common challenges to the forest sector across the region must underline the Regional Strategy.** Namely, control of invasive species and conservation or restoration of mangrove ecosystems.
- **A Regional Strategy will allow smaller countries to access the benefits of ‘no regret’ actions** such as updated geographic information and data management systems, forest sector human resource and skills development and access to regional, multi-stakeholder networks on forests and climate change.

Acronyms

ANU	Australia National University
APRC	Asia-Pacific Regional Centre
AR	Afforestation and Reforestation
BMU	Federal Environment Ministry (Germany)
BMZ	German Ministry for Economic Cooperation and Development
CBA	Community-based Adaptation
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CfRN	Coalition for Rainforest Nations
CI	Conservation International
COP	Conference of the Parties
CROP	Council of Regional Organisations in the Pacific
CSO	Civil Society Organisation
ENGO	Environmental Non-Government Organisation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility (of the World Bank)
FRA	Forest Resources Assessment
FSM	Federated States of Micronesia
FSPI	Foundation for the Peoples of the South Pacific
GEF	Global Environmental Facility
GFRA	Global Forest Resources Assessment
GHG	Greenhouse Gas
GIS	Geographic Information System
GIZ	German International Cooperation GmbH
HOAFS	Heads of Agriculture and Forestry
HOFS	Heads of Forestry
ICCRIFS	Integration of Climate Change Risks and Resilience into Forestry Management in Samoa
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
LLEE	Live and Learn Environmental Education
LULUCF	Land Use, Land Use Change and Forestry
MESCAL	Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (IUCN)
MNRE	Ministry of Natural Resources and Environment (Samoa)
MOFA	Ministry of Foreign Affairs (Japan)
MRV	Monitoring, Reporting and Verification
NAPA	National Adaptation Programme of Action
NGO	Non-Governmental Organisation
NLTB	Native Lands Trust Board (Fiji)
NPD	National Programme Document (UN-REDD)

OAR	Options Assessment Report
ODA	Official Development Assistance
OWL	Other Wooded Land
PCC	Pacific Conference of Churches
PCCR	Pacific Climate Change Roundtable
PES	Payment for Ecosystem Services
PICs	Pacific Island Countries
PICTs	Pacific Island Countries and Territories
PIFACC	Pacific Island Framework for Action on Climate Change
PIFS	Pacific Island Forum Secretariat
PMI	Pacific Mangroves Initiative (an IUCN initiative)
PNG	Papua New Guinea
REDD(+)	Reducing Emissions from Deforestation and forest Degradation (plus conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks)
REL	Reference Emission Level
RMI	Republic of Marshall Islands
R-PIN	Readiness Plan Idea Note
R-PP	Readiness Preparation Proposal
SIDS	Small Island Developing States
SOPAC	SPC Applied Geoscience and Technology Division
SPC	Secretariat of the Pacific Community
SPREP	South Pacific Regional Environment Programme
tCO ₂ e	tons of Carbon Dioxide equivalent
UN	United Nations
UNDP	UN Development Programme
UNDRIP	UN Declaration on the Rights of Indigenous Peoples
UNEP	UN Environment Programme
UNESCO	UN Educational, Scientific and Cultural Organization
UNFCCC	UN Framework Convention on Climate Change
UN-REDD	UN Collaborative Programme on REDD+
USD	United States Dollar

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Introduction

Climate change, REDD+ and the Pacific region

Nowhere on Earth is climate change more acutely and immediately relevant to economic, cultural and national welfare than in the Pacific. Pacific Island Countries (PICs) have therefore been prominent and vocal parties in negotiations taking place under the United Nations Framework Convention on Climate Change (UNFCCC).

To date, the priorities for PICs within the climate change debate have largely focused on securing finance for adaptation,⁴ as well as ambitious emission reduction commitments from industrialised countries. The issue of forests and climate change has not figured prominently in regional climate change policy debate in the Pacific.

Reducing Emissions from Deforestation and forest Degradation [plus] conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks, all now encompassed by the acronym **REDD+**, has become a prominent discussion track within UNFCCC negotiations in recent years. The objective of this discussion track is agreement on the design of a mechanism that rewards **developing countries** for their achievements in climate change mitigation through the forest sector.

Although REDD+ is primarily intended to recognize and reward actions taken by developing countries to ensure that forests within their territories contribute to the mitigation of climate change, it also presents a practical opportunity for many PICs to complement and reinforce their priority objectives in climate change negotiations:

- **Indirectly:** by providing an opportunity to improve adaptation by aligning forest sector policy with climate change adaptation strategies; and
- **Directly:** by presenting developing countries with an opportunity to obtain financial rewards in return for mitigating their own forest carbon emissions.

Eligibility for REDD+

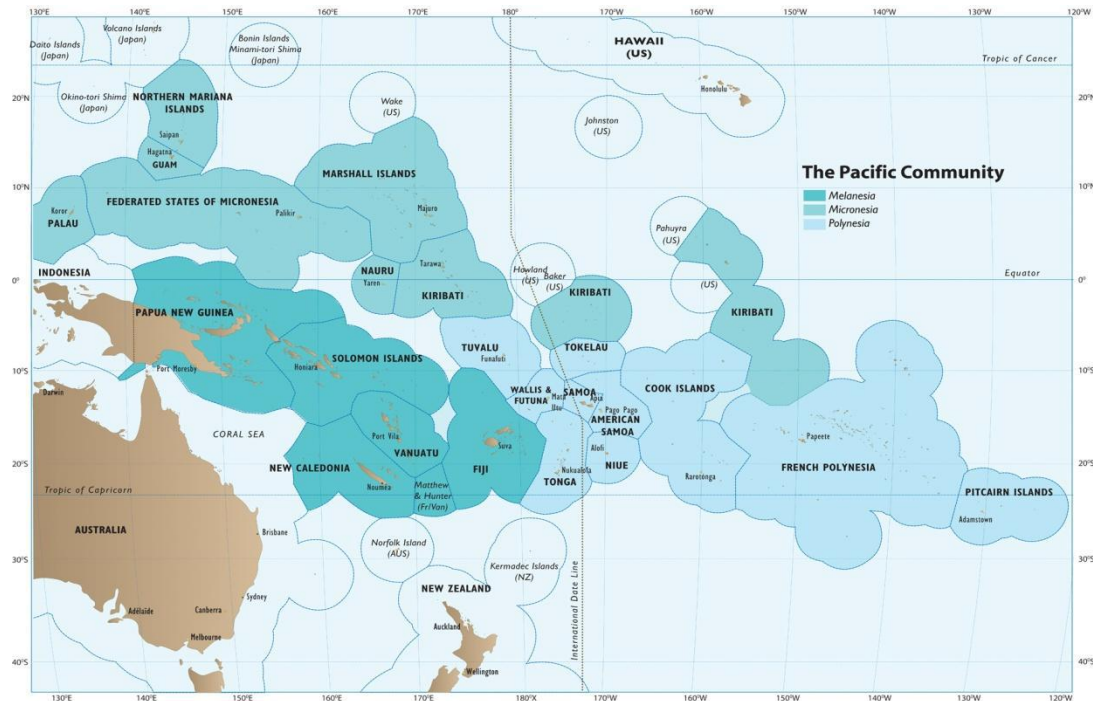
There are fourteen countries in the Pacific region (see Figure 1) which are members of the United Nations (UN) in their own right and are parties to the UNFCCC. For the purpose of this report, PICs refers only to these countries. They are: **Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Papua New Guinea (PNG), Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.**

Eligibility for REDD+ should not be confused with a country's **potential to benefit** from REDD+. This report will address the latter question for countries in the Pacific region. Eligibility is a comparatively simple matter. All developing countries that are full parties to the UNFCCC are eligible to pursue REDD+ if they wish to do so. Under the UNFCCC,

⁴ The focus on adaptation is evident from regional policy positions such as the Pacific Island Framework for Action on Climate Change (PIFACC).

developing countries are those which **are not listed** in Annex 1 of the UNFCCC and which do not have commitments to reduce emissions under Annex B of the Kyoto Protocol. These are often referred to as ‘non-Annex 1’ countries. **All fourteen PICs are non-Annex 1 countries.**

Figure 1: Map of Pacific Island Countries and Territories (GTZ, 2010)



Pacific Island Countries and Territories (PICTs) is a wider regional grouping that, in addition to all fourteen PICs, includes states and dependent territories administered by countries listed under Annex 1 of the Kyoto Protocol: Australia, France, New Zealand (Aotearoa), the United Kingdom and the United States of America.⁵ None of these territories can claim developing country status, according to the UNFCCC definition, and are therefore ineligible for REDD+. They will not be considered in any detail in this report.

Project background

The Pacific region lends itself to cooperation between nations. This is not due to geographical proximity – the PICs are separated by a vast expanse of ocean. Rather, the countries are drawn together by a shared cultural heritage, their relatively small size, and a shared recognition that they can overcome the disadvantages of limited budgets and personnel by pooling their financial, human and political capital.⁶

⁵ Pacific island territories include American Samoa (a territory of the USA), French Polynesia (an overseas entity of France), Guam (a self-governing territory of the USA), Hawaii (a state within the USA), New Caledonia (an overseas territory of France), Norfolk Island (a territory of Australia), Northern Mariana Islands (a self-governing territory in political union with the USA), Pitcairn (a dependent territory of the UK), Tokelau (a self-governing territory of NZ) and Wallis and Futuna Islands (an overseas territory of France).

⁶ For instance, see the ‘Pacific Plan for strengthening regional cooperation and integration’, an outcome of the 2004 Auckland Declaration issued by the Pacific Island Forum Secretariat (PIFS) on behalf of Pacific Island leaders.

In this context, the United Nations Development Programme and the Government of Japan recognise that the Pacific would benefit from a regional approach to REDD+ readiness, and have established the *UN-REDD Regional Pacific Project*. This project is a ‘Tier 2’⁷ contribution of UNDP to the UN-REDD Programme, managed by the UNDP Asia-Pacific Regional Centre, with the Government of Japan providing financial support for the project. The UN-REDD Programme itself is a collaborative programme between the UN’s Food and Agricultural Organisation (FAO), the UN Development Programme (UNDP) and the UN Environment Programme (UNEP). It was formed to support both the development of global standards and guidelines for REDD+ readiness, and the development and implementation of REDD+ readiness processes within participant countries.

The purpose of the UN-REDD Regional Pacific Project is to:

Support the development of a Regional REDD+ Readiness Support Strategy for the Pacific, working in close collaboration with the project “Climate protection through forest conservation in the Pacific Island Countries,”⁸ which is developing a strategic framework for a regional REDD+ programme in the Pacific, (see page 28);

Identify, for international donors and investors, the opportunities offered by the Pacific forest sector for achieving sustainable development goals.

For the purpose of this Project, the Government of Japan has chosen seven PICs as priority countries for support: Fiji, Kiribati, Republic of the Marshall Islands, Palau, Samoa, Solomon Islands and Tonga. This is not an indication of their greater potential to benefit from UN-REDD’s Regional Pacific Project compared to other PICs. However, they represent a cross-section of the different typologies of countries in the region and can serve to demonstrate how PICs may benefit from a regional REDD+ readiness process.

Scoping mission

The UN-REDD regional team at the UNDP Asia-Pacific Regional Centre (APRC) engaged a Consultant Team to conduct a scoping mission and to prepare this report for the Project. The scoping mission took place in Fiji (17–22, and 28–29 March 2011), and in Samoa (22–26 March 2011), with the aim of reviewing the status of REDD+ readiness at the regional level in the Pacific, and to identify the potential for national-level activities on REDD+ in Samoa. As part of the scoping mission, a member of the Consultant Team also attended the Pacific Climate Change Roundtable (PCCR) Conference in Niue from 14–18 March 2011.

⁷ Contributions of the three UN agencies to the UN-REDD Program are categorized as ‘Tier 1’ or ‘Tier 2’. Tier 1 contributions are funded directly with resources from the Multi-Donor Trust Funds under the UN-REDD Programme. Tier 2 contributions are funded through other arrangements, agreed between the concerned UN agency and donors.

⁸ Implemented jointly by the Secretariat of the Pacific Community (SPC) and German International Cooperation GmbH (GIZ).

During the scoping mission, the Consultant Team met with a broad range of stakeholders from regional organisations, government, civil society organisations, environmental groups and international donors. Annex A contains the mission itinerary, and Annex B contains a list of persons met during the mission.

Country typologies

Annex F contains a summary of the geographic and socio-economic context in the Pacific region. For the purposes of this report, the geographical and cultural sub-regions of Melanesia, Micronesia and Polynesia are less pertinent than classifications based on forest area and status. Accordingly, the fourteen PICs can be categorised into three general country typologies (Table 1).

Table 1: Country typologies in the Pacific⁹

Pacific Country Typologies	Large countries	Mid-sized countries	Small islands and atolls
Countries	<ul style="list-style-type: none"> • Fiji • Papua New Guinea • Solomon Islands • Vanuatu 	<ul style="list-style-type: none"> • Federated States of Micronesia • Samoa • Tonga 	<ul style="list-style-type: none"> • Cook islands • Kiribati • Marshall Islands • Nauru • Niue • Palau • Tuvalu

Large countries

This typology correlates exactly with the Melanesian sub-region. These four countries comprise 93% of the land area of the PICs and 98.5% of their total forest area. Only in these countries is it possible to operate forest concessions on an industrial scale.

Mid-sized countries

These countries include the two larger Polynesian nations (Samoa and Tonga) and FSM. Although not large enough to support industrial scale forestry enterprises, these countries are home to communities for whom forests are still an important part of their livelihoods.

Small islands and atolls

These seven countries consist mostly of low-lying atolls that cannot support significant areas of forest, except for mangroves and small coconut plantations.

⁹ The colours used to represent the three typologies in Table 1 are used for the same purpose throughout this report.

Status of Forest Resources in the Pacific

Forest extent

Table 2 shows the status of forest and tree cover in relation to total land area in the fourteen PICs, as presented in FAO's Global Forest Resources Assessment (GFRA) of 2010. The GFRA includes summary data for the Oceania region as a whole, which includes all PICTs as well as Australia and New Zealand. The size of the two latter countries masks the distinct nature of forest cover and dynamics within PICs. Figure 2 shows that while only 40% of land in Oceania is covered with trees, 73% of land in PICs is afforested in some form.

Table 2 and Figure 2 split total forest and tree cover into the three categories of **'Forest Land'**, **'Other Wooded Land'** and **'Other Land With Trees'** as stipulated in the Forest Resources Assessment (FRA) template provided to countries by FAO. These three categories are defined and discussed below.

Forest Land

"Spanning more than 0.5 hectares, with trees higher than 5 metres and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. This does not include land that is predominantly under agricultural or urban land use."

The exclusion of land under agricultural use is intended to keep tree crops such as oil palm out of the calculation. However, countries have not interpreted this provision consistently.

Other Wooded Land (OWL)

"Land not classified as "Forest", spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5–10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use."

OWL is distinguished from Forest Land by the inclusion of shrubs and bushes, and also by its non-classification as 'Forest' at the national level. The classification is subject to variable interpretation at the national level, based on designated land use. The higher proportion of OWL in Oceania is due to the widespread scrub and bush cover in arid regions of Australia. However, in the PICs, most of the areas under the OWL category are covered by plantations of coconut or other tree crops.

Other Land With Trees

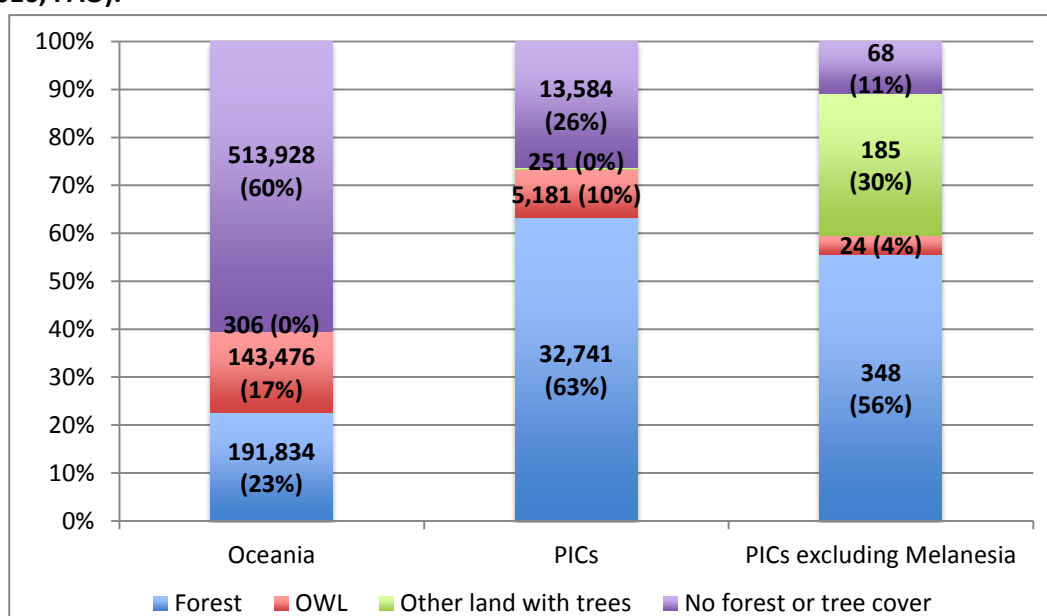
"Land classified as 'Other land', spanning more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity."

In the context of the FRA, all land not classified as 'Forest' or 'OWL' is classified as 'Other land'. As with the classification of land under 'Forest' and 'OWL', the classification of land under the category of 'Other land with trees' is quite subjective, according to national-level interpretation. In the Oceania region, the only countries to enter land under this category in their national FRAs were Fiji, Kiribati, Samoa and Tonga. These countries classified coconut plantations under 'Other land with trees', while other countries included them under OWL.

Table 2: Forest and tree cover in Pacific Island Countries (FAO 2010)

Country	Land Area (km ²)	Total Forest and Tree Cover (km ²)	FRA Categories of Forest and Tree Cover (km ²)		
			Forest	Other Wooded Land	Other Land with Trees
PNG	452,860	332,000	287,260	44,740	0
Fiji	18,270	11,580	10,140	780	660
Solomon Islands	27,990	23,420	22,130	1,290	0
Vanuatu	12,200	9,160	4,400	4,760	0
FSM	700	640	640	0	0
Samoa	2,830	2,560	1,710	220	630
Tonga	720	660	90	0	570
Cook Islands	240	160	160	0	0
Kiribati	810	770	120	0	650
Marshall Islands	180	130	130	0	0
Nauru	20	0	0	0	0
Niue	260	190	190	0	0
Palau	460	400	400	0	0
Tuvalu	30	10	10	0	0
TOTAL	517,570	402,380	327,380	51,790	2,510

Such variable definitions may distort the distribution of the three categories of tree cover at the national level. However, it is clear from Figure 2 that the Pacific, as a region, has a dramatically different pattern of forest cover to that of Oceania as a whole.

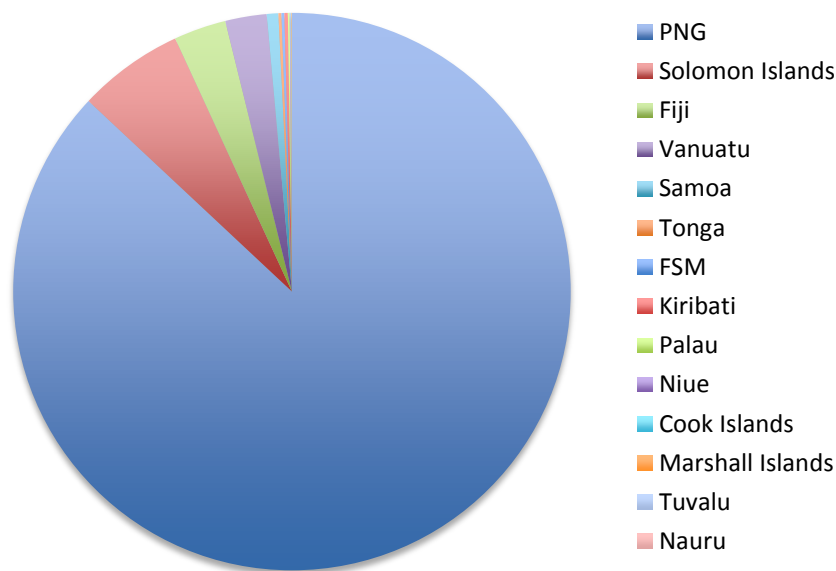
Figure 2: Forest and tree cover as a proportion of total land area in Oceania and PICs (GFRA 2010, FAO).

The countries of Melanesia contain the vast majority (96%) of all forest cover in the PICs.

Figure 3 shows that **87% of this area lies in PNG alone**. The forest areas of five of the PICs are too small to appear on the pie chart. In the same way that Australia and New Zealand's size distorts the overall picture on forest status for the Oceania region, the forests of Melanesia will heavily influence the conclusions to be drawn from an analysis of PICs forest cover statistics and mask the trends in smaller countries. Given PNG's global influence in the development of REDD+ mechanisms, and the country's perceived divergence from the stance of the rest of the PICs on REDD+ (see page 15), it is important to establish whether the forest status and trends in Melanesia are markedly different from the other PICs.

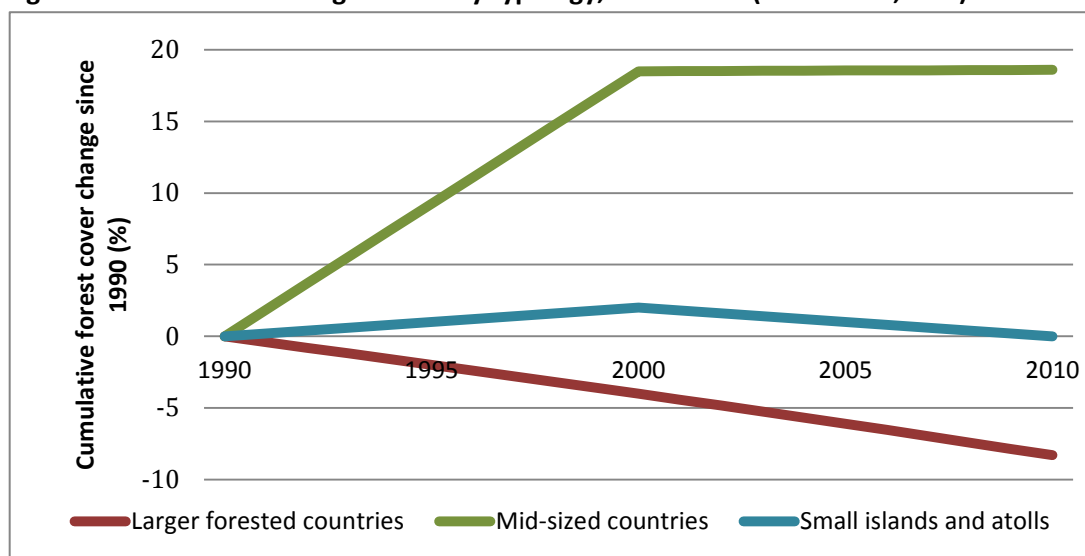
The proportion of land with tree cover in PNG is 73% – exactly the same proportion as in the PICs as a whole. However, as Figure 2 shows, when PNG and the other Melanesian countries are excluded, 89% of the land area of the PICs is under some form of tree cover. A significant proportion of this cover is classified as 'Other land with trees', a category which is otherwise hardly used in the Pacific. This land consists mostly of coconut plantations on Kiribati, Samoa and Tonga. Moreover, in the non-Melanesian PICs, Samoa is home to 50% of the land classified as forest under the FRA.

Figure 3: Proportions of total forest and tree cover in the PICs by country (GFRA 2010, FAO)



Forest cover change

When considering REDD+, more significant is the difference in forest cover and land use change between Melanesia and the other PICs. Figure 4 demonstrates that the three PIC typologies have exhibited quite divergent trends in forest cover change over the past twenty years. Forest area in Melanesia has declined steadily and dramatically, in line with the trends for PICs as a whole. However, forests in mid-sized countries saw an even more dramatic rise in area during the 1990s, followed by a levelling off. Tree cover on the small islands and atolls seems to be more stable than in the other two typologies.

Figure 4: Forest cover change in PICs by typology, 1990–2010 (GFRA 2010, FAO)

This summary suggests that the proportion of forest and tree cover in the larger forested countries will continue to decline relative to the other PICs. The reality, as illustrated in Table 4, is not so clear-cut.

To begin with, the dramatic decline of forest area in Melanesia is mostly attributable to PNG, which has lost nearly 3 million ha (or 9%) of its 1990 forest estate. A relatively small decline of 111,000 ha (< 5%) in the Solomon Islands over the same period has been partly offset by a rise of 61,000 ha in Fiji, while Vanuatu's forest area remained unchanged throughout the last twenty years, according to FRA data. Secondly, data on forest cover change does not take into account the categories of OWL or 'Other Land With Trees'. PICs in which the total tree cover includes large proportions of such areas (such as Kiribati, Samoa, Tonga and Vanuatu) cannot therefore provide an accurate picture of the change in forest area according to the statistics in the FRA.

Forest definitions

This variability in data and reporting methods will become more important as countries explore their potential for REDD+ implementation. Under the UNFCCC, the definition of 'Forest' is currently determined at the national level, according to three parameters defined by the UNFCCC. The definitions according to each parameter must fall within the following ranges:

1. Minimum area	0.05 to 1.00 ha
2. Minimum canopy cover	10 to 30%
3. Minimum potential height	2 to 5 m

Areas covered with young tree species with the potential to fulfil the above 3 criteria may also be defined as forests.

There is clearly potential for wide discrepancies between national definitions of forest, with major implications for the calculation of forest carbon stocks and thus the determination of

national targets under REDD+. The search for a unified global definition of 'Forest' is likely to continue to be a highly contentious issue within the development of a global REDD+ mechanism under the UNFCCC. In the PICs, with such relatively small areas of total forest area, a change of definition in a single country can influence the entire regional picture. FAO has recognised the particular need for Pacific countries to employ consistent methodologies in forest resource assessments. Working in partnership with the officially-nominated FRA National Correspondents and SPC, FAO will conduct a special study of forests and forest resources in the Pacific, with the intention of applying the conclusions to Small Island Developing States (SIDS) worldwide (FAO, 2010).

Data quality and implications for REDD+

The quality of data provided by different countries in their FRAs over the past two decades is highly variable. Apart from the three largest PICs (Fiji, PNG and Solomon Islands), these countries have not conducted regular nationwide forest inventories, largely due to limited human resources and infrastructure available to their forest administrations, if indeed they have such administrations. The apparent rise in the forest area of mid-sized countries in the 1990s, according to Figure 4, is entirely due to a change in forest classification in Samoa and does not reflect any substantial changes on the ground. Even the forest cover trends recorded in the small island countries are due to minor reassessments in just three countries (Cook Islands, Niue and Palau). They are the result of different inventory methods or forest classifications.

The stark differences between the summary FRA data for the Oceania region and that for the PICs argues for the consideration of the Pacific as a distinct region for future FRAs.

Furthermore, PNG is sufficiently distinct from the other PICs in terms of size, population, forest dependence and trends in forest cover. PNG's approach to REDD+ should not necessarily be considered a template for a regional approach to REDD+ in the Pacific.

Before this regional approach can be finalized, the status of forest resources in PICs must be correctly ascertained. Reliable forest inventory data, particularly regarding trends in forest cover change and quality, are essential to make first-order estimates of the costs and potential benefits of REDD+ programmes. **The data provided by PICs for the FRA does not allow such estimates to be made.**

REDD+ Readiness and the Pacific

Pacific Island Countries in REDD+ negotiations

REDD+ was one of the principal elements of the Cancun Agreement, the key output of the 16th Conference of the Parties (COP16) to the UNFCCC in December 2010. The inclusion of REDD+ within the UNFCCC framework was triggered by a proposal put forward in 2005 by the Coalition for Rainforest Nations (CfRN), spearheaded by Papua New Guinea. Despite PNG's leadership role, the involvement of the wider Pacific community in REDD+ negotiations has so far been limited.

More recently, a significant political divide has emerged among PICs regarding the role of forestry in the fight against climate change. PNG continues to advocate strongly for a quick start to a full international mechanism based on rapid advances in remote sensing technology, and was one of the original nine UN-REDD participant countries in 2009¹⁰. Meanwhile, the other three Melanesian countries independently explored REDD+ readiness strategies through different routes. Vanuatu pursued support from the World Bank's Forest Carbon Partnership Facility (FCPF) following the preparation of a Readiness Plan Idea Note (R-PIN) which was approved in 2009. Fiji initiated a REDD+ readiness process in 2008 with support from the German Ministry for Economic Cooperation and Development (BMZ), and the Solomon Islands became a UN-REDD partner country in 2011.

Other countries in the Pacific region have adopted a very different stance in their approach to REDD+. Small island and atoll nations have tended to view REDD+ through the lens of its effect on the emission reduction commitments of industrialised countries. Two concerns dominate this argument, as voiced most stridently by Tuvalu. First is the concern that REDD+ is a way for industrialised countries to sidestep their responsibility to reduce their own carbon emissions. Related to this is the risk that forest-related emission reductions may be less permanent, and therefore less certain to result in net reduction of greenhouse gas (GHG) concentrations than those based on substitution of fossil fuels with other energy sources. This is perceived as a particularly significant risk if emission reductions under REDD+ are determined in comparison with Reference Emission Levels and Reference Levels (REL/RLs) based on projected future scenarios which, by definition, cannot be verified with absolute certainty.

Parties involved in negotiations on REDD+ within the UNFCCC are acutely aware of these difficulties and are working to resolve them in line with the mandate given by the Cancun Agreements (UNFCCC, 2010). However, there is currently no prospect of bridging the gap between the positions of PNG and Tuvalu to reach a common Pacific position on REDD+. The

¹⁰ Although PNG was one of the original nine UN-REDD partner countries, PNG's National Programme Document was signed only in June 2011.

South Pacific Regional Environment Programme (SPREP)¹¹, which advises PIC delegates to the UNFCCC, has therefore not pursued REDD+ as part of a joint negotiating platform for PICs.

International legal obligations

The diversity of views among PICs is reflected by their different approaches to international agreements and conventions. All PICs are party to a range of international declarations, treaties and conventions which entail commitments to environmental and social standards of policy and practice in land management and forestry. Annex D contains a table showing the status of ratification of the various international treaties which have implications for REDD+ in the seven PICs eligible for support from the Government of Japan under the Tier 2 project. International legal obligations vary between individual countries, influencing the implications for REDD+ implementation among PICs.

Although all PICs are parties to the UNFCCC, and have ratified the Kyoto Protocol, there were sharp differences regarding the Copenhagen Accord¹². The seven PICs that were not prioritised by the Government of Japan for support under this project all declined to associate themselves with the Accord, on the grounds that it weakened progress towards reaching legally-binding commitments of Annex 1 countries in favour of voluntary pledges of emission reductions.

Several other international instruments, such as the 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP), the 1992 Convention on Biological Diversity (CBD) and the 2003 United Nations Convention against Corruption, will all be considered during the design of the international REDD+ mechanism. Hence, even those countries that have not ratified these instruments may find themselves committed to their underlying principles if they choose to engage in REDD+. Countries that have already integrated the commitments stemming from these instruments into their national legislation will have a head start.

Land ownership

The population of the Pacific region has one of the highest proportions of indigenous peoples in the world. The majority live under traditional governance systems that often extend to land tenure and management of natural resources. In recent decades, these systems have often existed simultaneously with introduced top-down systems of land governance, usually with little integration (PIFS, 2008).

Local communities own and manage a higher proportion of land in the Pacific than in any other region. Customary landowners in the PICs are thus key stakeholders in any land-use policy mechanism, such as REDD+. Table 3 shows the pattern of customary land ownership

¹¹ SPREP is a regional body, mandated by PICs to facilitate common regional policies and approaches to environmental issues in international fora. It is a member of the Council of Regional Organizations in the Pacific (CROP). For more details see Annex H.

¹² The Copenhagen Accord (Decision 2/CP.15, see <http://unfccc.int>) was the key outcome of the 15th Conference of Parties to the UNFCCC in December 2009. The parties agreed to 'take note' of the Accord, making it a voluntary, non-binding decision.

in the 14 PICs, according to records from 2008 held by the Pacific Island Forum Secretariat (PIFS). The only clear exception to the trend of customary land ownership is Tonga, a monarchy with all land under royal tenure. In Palau, although most customary land tenure is officially recorded, the relative proportions of customary and state-held land are unclear.

Recognition of customary land rights of indigenous and forest-dependent peoples is one of the most serious concerns that Environmental Non-Government Organisations (ENGOS) and Civil Society Organisations (CSOs) have regarding the development of an international REDD+ mechanism under the UNFCCC. In many jurisdictions the territorial and usufruct rights of indigenous peoples are unrecognised or unprotected. Furthermore, in response to initiatives that raise the potential value of forested land, as REDD+ is likely to do, there is a risk that these jurisdictions will undermine such rights in an effort to secure this added value for the state (Phelps *et al.* 2010). At first glance, such fears are less acute in the context of the PICs, where customary tenure systems are integral to social and legal environments. This will allow PICs to design REDD+ strategies based on community-based forest management systems, which are expected by many experts to have a greater chance of success than centrally-imposed strategies (Chhatre and Agrawal, 2009).

Table 3: Land tenure in Pacific Island Countries (PIFS 2008)¹³

PICs	Land Area (km ²)	Customary Land (%)	State Land (%)	Freehold (%)	Registration of customary land
PNG	452,860	97	2.5	0.5	none
Fiji	18,270	88	4	8	most
Solomon Islands	27,990	95	8	5	0.2%
Vanuatu	12,200	97	2	0	little
FSM	700	65	35	8	little
Samoa	2,830	81	15	4	some
Tonga	720	0	100	0	not applicable
Cook Islands	240	99	<1	little	65%
Kiribati	810	50	<5	>45	most
Marshall Islands	180	>99	<1	0	little
Nauru	20	>90	<10	0	most
Niue	260	98.5	1.5	0	10%
Palau	460	some	most	some	most
Tuvalu	30	100	0	<0.1	100%
Total	526,724				

¹³ Pacific Islands Forum Secretariat, 2008. *Land Management and Conflict Minimisation: Guiding Principles and Implementation Framework for Improving Access to Customary Land and Maintaining Social Harmony in the Pacific*, PIFS Land Management and Conflict Minimization Project, Suva, Fiji.

Clarity of land tenure is one of the key preconditions for implementing REDD+ programmes. Involvement of indigenous peoples and other forest-dependent communities is also necessary in developing National Programme Documents (NPDs) under the UN-REDD Programme. It is essential to establish which actors have influence over decisions that affect forest management in order to direct resources and incentives to appropriate interventions.

In this respect, the situation in the PICs is less amenable to REDD+. Although legislation exists in most countries for customary landowners to register land titles, very few have done so (see Table 3). Territorial disputes remain a common occurrence throughout the Pacific. However, whereas such disputes in mainland or archipelagic Southeast Asia are often between customary landowners and government bodies or agencies, in the Pacific they are largely local affairs between rival or adjacent communities. Fiji is a notable exception, where most customary land has been registered with the State with the assistance of the Native Lands Trust Board (NLTB). Fiji has a much higher proportion of non-indigenous peoples compared to other PICs. Land re-registration took place during colonial times as a means to codify communal land for ease of negotiating lease arrangements (France, 1969).

One of the key challenges to the development of comprehensive, workable REDD+ strategies in PICs is local-level conflict management. For example, conflict could be managed through the institutionalisation of customary land tenure with a widely-accepted, transparent system of land registration (PIFS, 2008).

What is REDD+ Readiness?

Given the significant differences between PICs, in terms of both forest condition and political perspective on REDD+, the benefits of a regional approach to REDD+ readiness may not be immediately evident. To understand the potential benefits, it is first necessary to clarify the difference between **REDD+ Activities** and **REDD+ Readiness**.

REDD+ Readiness is the process which countries should go through to become fully prepared, or 'ready', to implement REDD+ and potentially access its financial benefits.

The REDD+ readiness process is necessary because the implementation of REDD+ in any of the PICs is several years away, as it is for the vast majority of developing countries. This process has essentially two outcomes:

1. The country is able to make an independent, fully-informed decision on ***whether*** to implement a REDD+ strategy.
2. The country is fully ***capable*** to implement a prepared REDD+ strategy.

In 2009, the UN-REDD Programme and the FCPF developed an agreed framework for REDD+ readiness, intended to harmonize their respective programs.¹⁴ The framework specifies six components which are intended to guide the REDD+ readiness process (Table 4). These

¹⁴ See "Harmonization of Readiness Components", UN-REDD Programme, Note by the Secretariat, October 2009, UN-REDD/PB3/7.

components also constitute a broad guideline for compliance with the UNFCCC's Decision on REDD+ which forms part of the Cancun Agreements.¹⁵

Table 4: UN-REDD/FCPF components of REDD+ Readiness

Component 1: Management of the REDD+ Readiness process
Establishment of multi-stakeholder information network
Establishment of coordination mechanism
Preparation of a REDD+ readiness roadmap
Analysis of sectoral approaches to REDD+ (e.g., timber industry; agricultural sector)
Component 2: Stakeholder Engagement
Awareness raising – government agencies
Awareness raising – communities
Awareness raising – other (industry, armed forces, etc.)
Preparation/application of FPIC procedures
Component 3: Implementation Framework
Mainstreaming REDD+ into planning (land use and socio-economic development)
Design of benefit distribution system (including establishment of REDD+ Fund)
Strengthening forest governance – community or social forestry development
Strengthening forest governance – law enforcement and reduction of corruption
Application of social and environmental safeguards
Component 4: REDD+ Strategy Setting
Analysis of drivers of deforestation and degradation
Analysis of opportunities to enhance forest carbon stocks (reforestation, rehabilitation, etc.)
Identification of options
Preparation of National REDD+ Strategy, including consultation processes
Component 5: Reference Scenario
Analysis of past trends in forest cover and forest quality
Estimation of biomass equations (allometric equations)
Scenario setting for future trends in forest development
Estimation of interim reference scenarios
Component 6: National Monitoring System
Strengthening the national forest inventory process
Establishment/capacity building for remote sensing
Development of participatory monitoring techniques
Data management/capacity building for reporting (link to National Communications)

¹⁵ See Decision 1/CP. 16, available at:
[http://unfccc.int/documentation/decisions/items/3597.php?such=j&volltext="cancun agreements"#beg](http://unfccc.int/documentation/decisions/items/3597.php?such=j&volltext=)

Initiation of a REDD+ readiness process does not entail a national commitment to REDD+ implementation. A country may engage in one or more particular elements of the REDD+ readiness process outlined in Table 4 to support general development objectives. For example, a country may choose to participate in a regional Monitoring, Reporting and Verification (MRV) system under component 6 in order to establish a more sophisticated land management system, not solely in the forest sector. This is a very important consideration for some countries that are very reluctant, at this point, to ‘sign up’ to REDD+.

Progress towards REDD+ implementation is a process that occurs in phases. The REDD Options Assessment Report (REDD-OAR) to the Government of Norway in 2009 outlined three such phases (Angelsen *et al.*, 2009). The Cancun Agreements used the REDD-OAR recommendations as a basis for the phased approach to REDD+, outlined in Paragraph 73 of the Agreements as follows:

1. **Readiness Phase:** *The development of national strategies or action plans, policies and measures, and capacity building.*
2. **Policies and Measures Phase:** *The implementation of national policies and measures and national strategies or action plans that could involve further capacity building, technology development and transfer and results-based demonstration activities.*
3. **Implementation Phase:** *Results-based actions that should be fully measured, reported and verified.*

It is understood that phases 1 and 2 may overlap, e.g. a country may receive performance-based rewards for implementation of forest governance reform measures while still developing MRV skills and methods through the readiness phase. However, according to the Cancun Agreements, verification is done only in the last phase. Therefore any pilot performance-based payments made during Phase 2 cannot be considered as verified payments under REDD+.

Both the UN-REDD and FCPF programmes require countries to produce detailed proposals and plans (R-PINs and R-PPs) for REDD+ readiness, before funds are disbursed. **This entails an implicit commitment on the country’s part to complete the readiness process**, and an assessment on the part of the UN-REDD and FCPF Policy Boards that the country is capable of completing the process. The two programmes are official observers to each other’s Policy Boards, which occur in parallel on a twice-yearly basis, allowing for intricate collaboration.

Completion of a REDD+ readiness process does not necessarily lead to REDD+ implementation. This decision must be entered into freely by the country as a whole, and by the various affected actors. It can only be made based on the status of international negotiations and the economic and political environment at the time of completion of the readiness process.

REDD+ activities

A Regional Strategy for REDD+ Readiness in the Pacific must embrace regional diversity. The Cancun Agreements identify five categories of activities under REDD+, based on the

description of REDD in the Bali Roadmap developed at COP13. A national REDD+ strategy can be based on any combination of the five activities, depending on the status of forest cover, condition, trends or the wider economic, social and political environment. Due to the diversity in size and forest status among PICs, the appropriate REDD+ activities will differ markedly among them. Table 5 introduces the five categories of REDD+ activity and suggests their relevance in the Pacific region.

Table 5: REDD+ activities under the Cancun Agreements

	REDD+ Activity	Example	Relevance in Pacific
Reducing carbon emissions	1. Reducing deforestation	Slowing the rate of conversion of natural forest to tree-crop plantation or other land use	Highly relevant in Melanesian PICs
			Less relevant in mid-sized countries
			Not relevant in small islands and atolls
	2. Reducing forest degradation	Reducing forest areas affected by selective logging, grazing, fire or fuel wood collection	Relevant in Melanesia, but less than reducing deforestation
			Very relevant in mid-sized PICs.
			Less relevant for small islands and atolls
Increasing or maintaining carbon stocks and sequestration rates (the '+' in REDD+)	3. Conserving forest carbon stocks	Protection-oriented management of wilderness areas	Potentially relevant for remote, unpopulated forest islands in all country typologies
			As above
			As above
	4. Sustainable management of forests	Extending logging cycles from 10 years to 30 years to allow a greater amount of carbon to develop in regrowth	Relevant to all PICs with forests managed for production, whether subsistence or commercial
			As above
			As above
	5. Enhancement of forest carbon stocks	Forest regeneration and rehabilitation	Very relevant to all PICs that wish to conserve and restore mangroves
			As above
			As above

Adapted from "Staying on Track: Tackling Corruption in Climate Change", p.27 (Thorpe and Ogle, 2010)

Which countries may benefit from REDD+?

Although certain categories of REDD+ activities may be relevant for PICs, the potential for a country to implement and benefit from a national REDD+ process is another matter. The details of the REDD+ mechanism, particularly the financing arrangements, are still subject to negotiation through the UNFCCC. However, in order to benefit from REDD+, it is already clear that developing countries must have:

- **A viable forest sector in terms of both forest area and forest management.** Since REDD+ (as opposed to REDD) includes enhancement of forest carbon stocks, it is possible to envisage REDD+ benefits from *potential* forest area. However, regardless of actual or potential forest extent, there must also be the potential for human intervention to change the pattern of forest use and management. REDD+ implementation depends on *change* in activities that influence forest sector emissions. A country is unlikely to benefit from REDD+ if it has extensive forest wilderness area but no local population, industry or forest administration whose activities may impact on this area.
- **Cost-effective options for reducing net GHG emissions from the forest sector.** The potential *revenue* that a country may obtain through REDD+ cannot be estimated with any reliability. In a market-based system, potential revenue depends on the price of CO₂ equivalent (tCO₂e), which has been extremely volatile over the past decade. In a fund-based system, the potential revenue depends on negotiated bilateral or multilateral fund transfer arrangements between donor and recipient countries. However, these arrangements are essentially political and liable to lapse with changes of administration. On the other hand, the financial *benefit* that a country may obtain depends also on the costs of associated changes in land-use policy and management and the opportunity costs of alternative land-use options. These costs can be estimated in most instances, with some degree of confidence. Although, like commodity price indices, they do fluctuate over time.

In order to determine whether they are likely to benefit from REDD+ implementation, PICs must find answers to the following questions:

- Can the country support a viable forest sector?
- How much net GHG emission reductions are achievable through changes to the forest sector and related land-use policies?
- What is the cost of these changes per tCO₂e?
- What is the potential to increase forest carbon stocks?

A set of decision-making tools, based on these questions, may be developed to analyse the feasibility of REDD+ implementation for each country. For some PICs, particularly the smaller atoll island states such as Kiribati and Tuvalu, the answers can be obtained relatively swiftly and will demonstrate that the implementation of REDD+ is unlikely to deliver net financial benefits at the national level. Melanesian countries, with their more extensive forest areas, have already deduced that they have the *potential* to benefit from REDD+, and have initiated REDD+ readiness processes accordingly. For mid-sized countries with smaller forest sectors, a decision on the viability of REDD+ implementation will be marginal and therefore requires more thorough consideration.

Which countries may benefit from a regional REDD+ readiness process?

The essential difference between a national and regional REDD+ readiness process is that a national process implies a commitment to address all six components, while a regional process does not necessarily commit any countries to all components.

This proviso allows PICs to engage in a regional REDD+ readiness process regardless of their stance on REDD+ negotiations or their potential to implement a cost-effective REDD+ strategy in the long-term. Although the readiness process is dependent on the availability of financial and technical donor support, PICs undertaking a full national readiness process are nevertheless obliged to allocate often scarce human resources, infrastructure and other assets for the duration of the process. Ultimately, they must demonstrate the long-term sustainability of REDD+ implementation independent of external donor support. A regional process does not impose this obligation on countries and opens up several ways for countries to benefit, which can be categorised according to the hierarchy of benefits outlined below.

Hierarchy of benefits from regional REDD+ readiness

This hierarchy describes a progression of five categories of benefits that countries can derive from a regional REDD+ readiness process. The list begins with benefits that are most widely applicable and require the least commitment and resources from national institutions. It ends with benefits relevant for the preparation of a national REDD+ programme, which presupposes the substantial commitment of time and resources required for a national process.

1. **Engagement in regional REDD+ policy debate:** A multi-stakeholder steering group is required to develop and manage a national REDD+ readiness process. All members of this group can exert a degree of influence over the direction of the process. The same is true of a regional process. By becoming involved in such a group, not only will countries be able to influence regional REDD+ strategies, they will stay informed of developments in the region and become empowered to act on this information.
2. **Practical ‘no-regret’ improvements to forest sector:** The readiness process includes developments that provide benefits regardless of the eventual decision for or against implementation of REDD+. The financial and technical support provided through a regional readiness process may provide, at little or no cost, benefits which may not otherwise come about due to political or structural inertia, lack of awareness or low priority. Examples include access to updated Geographic Information System (GIS) data and thus to strategic land-use analysis and planning; and access to international networks and expertise on forests, land use and climate change.
3. **Access to financial support:** When it comes to the forest sector, REDD+ is at the forefront of donor agencies’ investment portfolios. Countries that can articulate their development requirements in terms of relevance to REDD+ are at a distinct advantage. Many countries, such as Vanuatu, have not yet received the funds allocated to them under the FCPF program but have found that the R-PIN document is a valuable strategic framework for accessing bilateral funding from other sources of

support. In the absence of such national level frameworks, association with a regional REDD+ readiness process would allow PICs to demonstrate how investments in the forest and other land-use sectors may link to REDD+ outcomes.

4. **Decision-making process for REDD+:** It is particularly important for medium-sized PICs to invest in a thorough decision-making process before committing scarce resources and personnel to national REDD+ readiness. A regional readiness process can provide access to the expertise and financial support required to make such an assessment. In particular, it can facilitate awareness raising and capacity building across multiple government sectors, civil society groups and local communities. External expertise can be accessed to generate up-to-date carbon stock data and economic analysis of REDD+ intervention options.
5. **Preparation for national REDD+ program:** Ultimately, for countries that decide to carry out a full national REDD+ readiness process, engagement at the regional level will provide an avenue for sharing lessons and experience with other PICs, and with countries further afield, in all six components of REDD+ readiness, including developing approaches and methods for MRV development.

Figure 5: Potential benefits of a Regional REDD+ Readiness Process

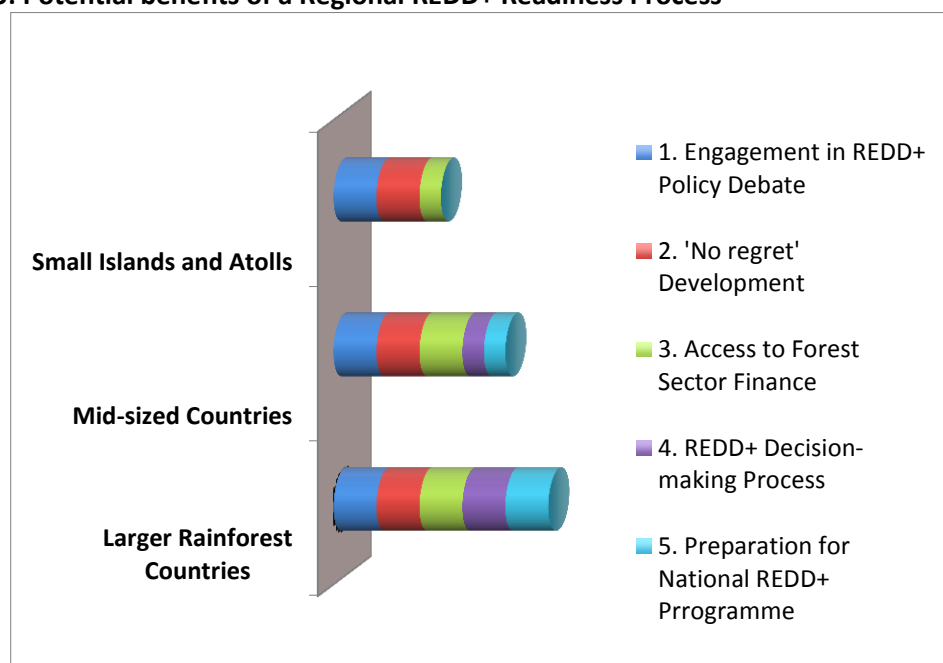


Figure 5 indicates how this hierarchy of benefits applies to the three PIC typologies described in this report.

Small islands and atolls will derive benefits from engagement in regional REDD+ discussions and from 'no regret' developments such as improved data on land use. In some cases they may also benefit from access to financial support for forest sector activities. Although these countries do not operate stand-alone forest departments or services, some of them, such as Kiribati, Niue and Palau, have tens of thousands of hectares of tree cover, including mangroves and vulnerable island ecosystems, which require substantial resources for their

protection and management. Although unlikely to progress towards national REDD+ programmes, participation in a regional REDD+ readiness process may present the best opportunity for the smaller PICs to access such resources.

Large countries, such as the countries of Melanesia, stand to receive the full complement of benefits defined in the hierarchy above. These benefits, such as those offered through the SPC/GIZ regional project (see Table 6 and Annex H), supplement the support that each country is already receiving for national REDD+ readiness processes.

Mid-sized countries do not currently have any clear prospect of receiving external support for national-level REDD+ readiness processes. In addition to the benefits from access to financial resources for their forest sectors, FSM, Samoa and Tonga would all gain from a thorough objective assessment of their potential under a REDD+ mechanism. Depending on the outcome of such an assessment, they may also gain from the support for a national REDD+ readiness process. Relative to their current situation, **these countries stand to gain more from a regional REDD+ readiness process than their larger Melanesian neighbours.**

A Regional REDD+ Readiness Support Strategy for the Pacific

Current REDD+ initiatives in the Pacific

The Pacific region hosts a number of regional bodies and international organisations that are involved in REDD+ initiatives, or have expressed interest in becoming involved. These regional stakeholders and their activities are described in Annex G.

The Pacific Island Forum Secretariat (PIFS) is the regional body that brings together the governments of PICTs to coordinate policy issues of common interest. On climate change, the PIFS is guided by the Pacific Island Framework for Action on Climate Change (PIFACC), a document currently under review. Progress is monitored through annual meetings of the Pacific Climate Change Roundtable (PCCR).

PIFS is served by the Council of Regional Organisations in the Pacific (CROP) for advice on technical and policy matters. SPC is the CROP agency with the most wide-ranging policy brief, including forestry. In 2011, SPC also incorporated the Pacific Islands Applied Geoscience Commission (SOPAC) and thus now also delivers advice and expertise on Geographic Information Systems (GIS) as a tool to support decision-making. Accordingly, SPC is the regional organisation with the most direct relevance to the development of REDD+ strategies. It supports regional forest policy discussions through the Heads of Forestry (HOFS). SPREP is the CROP agency responsible for policy advice on broader climate change issues, and accordingly coordinates the PIFACC and PCCR processes.

Several international ENGOs, chiefly the International Union for the Conservation of Nature (IUCN), Live and Learn Environmental Education (LLEE) and Conservation International (CI) have also begun to explore REDD+ initiatives in the Pacific. A number of regional CSOs, notably the Pacific Conference of Churches (PCC), the Foundation for the Peoples of the South Pacific (FSPI) and the Pacific Gender Climate Coalition (Gender CC), will have a substantial influence on the implementation of any REDD+ activities. These ENGOs and CSOs are introduced in more detail in Annex G.

International donors and development partners are already working on a range of REDD+ activities in the Pacific. Table 6 summarizes current donor activity on REDD+. Annex H contains more information about the projects and programmes listed here.

The SPC/GIZ project 'Climate Protection through Forest Conservation in Pacific Island Countries' is the only initiative listed in Table 6 with the specific objective to develop a regional approach to REDD+ in the Pacific. Although the project's field-based activities will be confined to Melanesia, by working through the HOFS forum it will involve all PICs in the development of a Regional REDD+ Action Plan. Through the project, significant progress towards such an Action Plan has already been made. GIZ and SPC's collaboration on REDD+ predates this initiative; they have been supporting the Government of Fiji's national REDD+

readiness process since 2009 through the project ‘Coping with Climate Change in the Pacific Island Region.’ They have also supported other PICs in capacity building for forest inventory.

In addition to their contribution to this Tier 2 UN-REDD project, the Government of Japan finances REDD+ readiness activities in Samoa through their MRV System Installation Project, with technical support from the Japan International Cooperation Agency (JICA).

Table 6: Projects in the Pacific Region with explicit relevance to REDD+ readiness

Project/Program	Source of funds	Target countries	Implementing agency/partner	Duration	Indicative Budget
UN-REDD PNG National Programme	UN-REDD Multi-Donor Trust Fund ¹⁶	PNG	PNG Office of Climate Change and Development	2011-13	USD \$6.4 million
UN-REDD Solomon Islands National Programme	UN-REDD Multi-Donor Trust Fund	Solomon Islands	SI Ministry of Environment and Climate Change	2011-12	USD \$550,000
Coping with Climate Change in the Pacific Island Region (REDD+ component)	BMZ (Germany)	Fiji	SPC and GIZ	2008-15	part of USD \$14 million
Climate Protection through Forest Conservation in Pacific Island Countries	BMU (Germany)	Fiji, PNG, Solomon Islands, Vanuatu	SPC and GIZ	2010-14	€4.9 million
MRV System Installation Project	Japan Ministry of Foreign Affairs (MOFA)	Samoa	Samoa Ministry of Natural Resources and Environment	2011-13	USD \$3 million
Governance and Implementation of REDD in Small Island Developing States	EU	Fiji, Solomon Islands, Vanuatu	Live and Learn Environmental Education (LLEE)	2011-15	€2.1 million
Establishing a REDD+ MRV system for PNG	Government of Japan / JICA	PNG	PNG Forest Authority	2011 onwards	USD\$10.5 million

Strategic goals and outcomes

Based on the contexts described in this report, UNDP proposes a Regional REDD+ Readiness Support Strategy for the Pacific, not as a UN-REDD Programme, but rather as a framework that may guide the interventions of a range of supporting agencies. To be a valuable, effective policy tool, it must account for and build on the existing investments and interventions that contribute to REDD+ readiness and broader forest sector development described above and in Annexes G and H. In particular, it must be closely aligned with the regional REDD+ process facilitated by SPC/GIZ and JICA. The Regional Strategy must also cover all six components of readiness described in Table 4 in order for individual countries and the region as a whole to comply with the processes and standards currently being developed through UNFCCC negotiations on REDD+ and other international fora.

¹⁶ Currently consisting of contributions from Norway, Spain, Denmark, Japan, and the European Commission.

This report presents a strategy that will serve the long-term goal of achieving regional-scale REDD+ readiness in a strategic and cost-effective way for Pacific Island Countries, in collaboration with the existing initiatives of key development partners.

An initial phase of the strategy would have two outcomes:

1. Regional Outcome

All countries in the region have a comprehensive understanding of the potential benefits and risks associated with REDD+, and are able to make informed decisions about engagement in REDD+ and REDD+ readiness activities.

2. National-level Pilot Outcome

REDD+ readiness is implemented as part of the overall national low carbon and climate resilience strategy in **one mid-sized PIC**; supported by effective, inclusive and participatory management processes.

Regional Outcome

Output 1: Regional REDD+ readiness roadmap

The SPC/GIZ project 'Climate Protection through Forest Conservation in Pacific Island Countries' is developing a regional REDD+ roadmap as one of its three objectives. This roadmap will provide a joint, coherent framework for the implementation of REDD+ in the Pacific.

A project workshop held in November 2010 produced a general framework for a draft regional REDD+ readiness roadmap for the four Melanesian countries. SPC/GIZ intends to revise this document and submit for discussion and approval at the HOAFS meeting scheduled for September 2011 (see Table 9 in Annex H).

UN-REDD proposes to work in partnership with SPC/GIZ on this revision process, recognising that the process for establishing a regional mechanism is in its infancy, and that presently only a broad outline of a framework has been developed. The UN-REDD Tier 2 project can assist in ensuring that the Roadmap is consistent with the six components of REDD+ readiness (see Table 4) and by supporting a broad-based multi-stakeholder consultative process, ensuring that mid-size and smaller PICs have an opportunity to contribute to the development of the Roadmap. Annex E outlines the specific areas in which UN-REDD may collaborate with the SPC/GIZ project and contribute to its objectives.

Output 2: Regional REDD+ information platform

The second objective of the SPC/GIZ project is the creation of a Regional REDD+ Information Platform. Such a platform is intended to improve the implementation of REDD+ activities in the Melanesian PICs through providing ready access to relevant information to a wide group

of stakeholders. It will include the development of a network of REDD+ experts and interested parties.

UN-REDD will complement the efforts of the SPC/GIZ Regional REDD+ Information Platform. During an initial period of one year, these efforts could comprise the following:

- **Initiate a regional stakeholder network** by organising a regional awareness workshop on REDD+ to coincide with the HOFs meeting in September 2011, including cross-sectoral and civil society participation.
- **Develop an online information service** where users can share experiences, data and ideas. This will be aligned with a regional Pacific Climate Change portal being developed by SPREP, with the assistance of Geoscience Australia¹⁷. Through the Regional REDD+ Readiness Support Strategy, UN-REDD and partners would coordinate the REDD+, forest and land-use element of this portal.

Output 3: Decision-making support programme for REDD+

As noted above, mid-sized countries stand to benefit more from a Regional REDD+ Readiness Support Strategy than other PICs. In particular, they require assistance to make informed decisions on their engagement with REDD+ readiness processes and potential REDD+ strategy implementation. Such decisions must be based on a realistic assessment of costs and risks associated with such engagements as well as estimates of possible benefits within well-defined confidence limits.

Although a thorough decision-making process can only be conducted on an individual country basis, much of the guidance regarding information, data and capacity requirements can be provided through a regional support strategy. Moreover, many of the skills and information services required for this decision-making process can be considered as ‘no regret’ developments from the perspective of the small islands and atolls. The utility of these developments extends beyond REDD+, by providing a sound basis for forest and land-use elements of broader low-carbon development strategies.

Potential activities under this output over an initial one-year period include:

- **Facilitation of an information and knowledge management service**, linked to the development of the portal (above); a ‘helpdesk’ provided through collaboration between UN-REDD and SPC/GIZ.
- **Support for relevant studies** such as vegetation change analysis in at least two small island or atoll countries. This will build on current work by the Pacific Islands Applied Geoscience Commission (SOPAC), which completed a full national vegetation cover analysis for Kiribati in May 2011.
- **A decision-making support package for REDD+, forest and land-use** targeted at mid-sized and small island states, with expert advice on implementation of the package provided to four countries.

¹⁷ The mock-up of the portal is available at www.pacificportal.com.au

National-level Pilot Outcome

Case study country for national-level activities

While the regional outcome of the Regional Strategy stresses the benefits common to all countries from engagement in REDD+ readiness, the national-level pilot outcome will focus on exploring practical approaches for smaller countries to benefit from REDD+ implementation. Although, as illustrated in Figure 5, all PICs may have some potential to benefit from a Regional REDD+ Readiness Support Strategy, a case study country is proposed to illustrate how these benefits may come about.

Activities under this outcome will be implemented in the context of a Pilot Programme for national-level REDD+ strategic planning in a PIC.

The eligibility criteria for case study countries are:

1. One of seven PICs chosen by the Government of Japan as priority countries for REDD+ Readiness support (see page 7 for the list of eligible PICs)
2. No current national-level REDD+ Readiness support programme (i.e. no Melanesian countries)
3. A forest sector with the potential for human intervention to affect forest cover and management (i.e. no small island or atoll countries)

The choice of case study country for the national-level outcome of the Regional REDD+ Readiness Support Strategy therefore comes down to Samoa and Tonga (FSM is not a priority country of the Government of Japan). The governments of smaller PICs are already stretched for financial and human resources. Indeed, it is possible that concentration of these scarce resources on a REDD+ readiness strategy may divert them from more immediate needs, particularly from climate change adaptation and disaster risk reduction strategies. Therefore, REDD+ readiness pilot activities should ideally build on existing programmes and investments in the forest and land use sector.

On this basis, Samoa is the most suitable PIC for national-level pilot activities. The analysis for Samoa, as the case study country for the national-level pilot outcome, is presented in the next section. National-level analyses of legal and policy frameworks and REDD+ readiness in the remaining six of the Government of Japan's priority countries are presented in Annex C.

Case study country: Samoa

Country overview

Samoa is a small island country in the southwest Pacific, comprised of two main inhabited islands (Upolu and Savaii) and six smaller islands. It has a total area of about 2,900 km².¹⁸ Samoa's main islands have a rugged and mountainous topography, and are mainly of

¹⁸ Country and forestry statistics in this summary are taken from Samoa's Second National Communication to the UNFCCC (2010), and FAO's Global Forest Resources Assessment 2010 Country Report on Samoa.

volcanic origin. The population is approximately 180,000, with a growth rate of 0.3-0.9% per annum. It has a density of 63 people/km², with 77% of the population living in rural areas.

Formerly known as Western Samoa, Samoa gained independence in 1962 and is a stable parliamentary democracy. The National Legislative Assembly is elected by universal suffrage, which in turn elects Samoa's Head of State. All of the 49 seats in the National Legislative Assembly are reserved for *matai*, the recognised chiefs of Samoan villages. The Samoan Government is administered by a Cabinet which consists of the Prime Minister and 12 ministers. National elections took place in March 2011.

In 2008, Samoa's GDP was around USD \$537 million, with a per capita income of USD \$4,555. The economy depends heavily on natural resources, both for the subsistence of its population and for economic development. The bulk of Samoa's exports are from agricultural commodities, including coconut oil, coconut cream, bananas, taro, kava and fish. Samoa's national income depends heavily on international trade, official development assistance (ODA), and remittances. Although it is currently categorised as a Least Developed Country, it is expected to graduate from this status in January 2014.

Samoa depends upon imported petroleum products for much of its energy needs. Diesel currently supplies about half of Samoa's electricity, with the other 50% coming from hydroelectric power plants. The objective of the Samoa Energy Policy is to overcome Samoa's reliance on imported fossil fuels through renewable energy sources like solar, wind, coconut oil and biomass.

Samoa is highly vulnerable to the effects of climate change, through exposure to tropical cyclones, prolonged periods of drought, storm surges and sea level rise. Samoa submitted its National Adaptation Programme in 2004, and is well advanced in implementing its projects under its National Adaptation Programme of Action (NAPA).

Status of forest resources

Sixty percent (171,000 ha) of Samoa has forest cover; 68% on Savaii and 48% on Upolu. At present, there are no data available to estimate forest carbon stock. Mangroves occupy 369 ha, or 0.13% of the land area in Samoa. Although historical evidence indicates that Samoan forests were once mostly closed canopy with a small element of secondary forest, the forest is now highly degraded and 'open', with many invasive species. They are one of the main drivers of biodiversity loss, as endemic species cannot compete effectively against them.

Drivers of deforestation and forest degradation

Deforestation rates in Samoa appear to be very low, although it is difficult to interpret trend data on forest cover due to the changes in classification and survey methodologies over time. The general view of FAO and Samoa's Forestry Division is that forest area did not change between 2000 and 2007.

There is no clear evidence that logging and timber production pose a significant problem. The Government of Samoa banned timber exports in the early 1990s. Commercial logging was banned in 2007. There is no commercial timber industry and illegal logging is rare. When

forest clearance does occur, the most common drivers are urban expansion and development.

Taro has long been the main food crop in Samoa, and the expansion of taro cultivation was a significant driver of forest degradation and forest clearance between the 1970s and 1990s. Initially limited to home gardens and coastal areas, the commercialisation of the taro crop led to clearance of forest areas further inland and at higher elevations where other crops grow poorly. Samoa was affected by taro blight in the early 1990s, and consequently large areas cleared for taro were abandoned and have been replaced by secondary forests that are dominated by invasive species. New species of taro have since been introduced and agricultural activities are now shifting closer to villages.

Forest degradation is not so much a matter of reduced forest carbon stock in the context of Samoa – the bigger problem is the threat posed to biodiversity by the spread of invasive species. This situation is common to many small island ecosystems in the Pacific and beyond. A practical approach to address this issue through REDD+, termed '**Island REDD+**', is presented in Annex I.

A second key area of forest degradation is the threat to mangrove ecosystems. Several international institutions recently launched the Blue Carbon Working Group, to address the issues surrounding carbon stocks in marine and coastal ecosystems, including mangroves (CI/IUCN/UNESCO 2011). The rate of mangrove loss over recent decades on Samoa is not clear, but it now has one of the lower recorded densities of this forest type in the Pacific. A practical approach to address this issue through REDD+, termed '**Bio-shield REDD+**', which specifically addresses its contribution to coastal zone protection, is presented in Annex I.

[Forest regulation](#)

Forest resources in Samoa were regulated under the *Forests Act 1967* until it was repealed and replaced by the *Forest Management Act 2010*. The new Act is intended to establish a framework for sustainable forest management and prohibits commercial logging. Forest legislation is administered by the Ministry of Natural Resources & Environment (MNRE), which currently employs about 200 staff. Samoa is also a signatory to several international treaties and obligations (for details see Annex D).

[National strategic policy document](#)

National strategic documents relevant for the development of REDD+ include:

- The Strategy for the Development of Samoa 2008-2012
- Samoa's National Climate Change Policy
- Samoa's National Action Plan for Adaptation (NAPA)
- The National Greenhouse Gas Abatement Strategy
- Samoa's Biodiversity Strategy and Action Plan: Keep the Remainder of the Basket (2001)

Customary land tenure

Approximately 81% of land is owned as customary land, while 15% of land is held by the State, and 4% is categorized as freehold.¹⁹ Customary land cannot be alienated except by lease or license, or by compulsory acquisition for a public purpose (Constitution, clause 102). Only a small amount is registered under the *Land Titles Registration Act 2008*. Land is administered under the *Lands, Surveys and Environment Act 1989*, which established a Land Board, Land Committee and an Environment Board. The Land and Titles Court settles disputes over customary land (Constitution, clause 103; *Land and Titles Act 1981*). Land disputes are frequent, and need to be addressed by REDD+.

Protected areas

The *National Parks and Reserves Act 1974* regulates protected areas. There are five national parks, the oldest of which is the O Le Pupu-Pue National Park on Upolu, established in 1978. Samoa does not yet have any World Heritage sites but has two sites on the tentative list for World Heritage listing: Manono Island, between Upolu and Savaii; and Fagaloa Bay in western Upolu. From time to time, the UN Education, Scientific and Cultural Organization (UNESCO) has some budgetary resources available for small-scale development activities which can be used to prepare and implement management plans for World Heritage areas. These could incorporate REDD+ elements.

Land-use planning

Samoa has a modern land-use planning law, *Planning and Urban Management Act 2004*.

Community-based decision making

The *Internal Affairs Act* makes provision for the recognition and organisation of village assemblies, which operate as a system of local government. The *Village Fono Act 1990* empowers the Village Fono (village assembly) in each village to exercise their authority in accordance with Samoan custom and tradition. Village Fonos have specific power to make rules governing the development and use of village land. These laws are aimed primarily at validating the exercise of power by traditional authorities, and do not necessarily facilitate broad-based community involvement in decision-making. For example, they do not make any provision for the involvement of women through Women's Councils, which are quite distinct from village councils.

Output 1: National REDD+ working group and readiness roadmap

According to component 1 of the UN-REDD guidelines to national REDD+ Readiness processes, a broad-based, multi-stakeholder working group must be established to govern the process. The initial task of the working group will be to formulate a roadmap for REDD+ readiness, incorporating the relevant ongoing and planned activities of forest sector

¹⁹ Pacific Islands Forum Secretariat, 2008. *Land Management and Conflict Minimisation: Guiding Principles and Implementation Framework for Improving Access to Customary Land and Maintaining Social Harmony in the Pacific*, PIFS Land Management and Conflict Minimization Project, Suva, Fiji.

development projects and land-use planning processes, particularly those which are in line with Samoa's NAPA, under the coordination of the MNRE.

Engagement with a broad range of stakeholders is an essential precondition for REDD+ to succeed. Samoa has an active NGO/CSO sector which should be engaged in any REDD+ readiness process, which includes the Samoa Umbrella Network for NGOs (SUNGO) and the Ole Siosiomaga Society, as well as representatives of customary landholders.

In the first twelve months of the Regional Strategy implementation, the following activities are proposed:

- **A national awareness raising and consultation workshop** to initiate the formation of a REDD+ readiness working group.
- **A national multi-stakeholder consultation exercise** to identify priorities in the forest and land-use sectors, gaps in financial and human resources and realistic, time-bound objectives for a REDD+ readiness roadmap.
- **A monitoring mechanism** will also be developed to allow transparent assessment of progress towards roadmap objectives by all stakeholders.
- **A programme of awareness raising, training and capacity development events** for government staff, the private sector, CSOs and communities with direct involvement in REDD+ readiness activities.

The above activities will be conducted in coordination with the suite of ongoing and proposed forest sector projects in MNRE's portfolio. MNRE has USD \$66 million from a total of twelve projects in the planning or implementation stage that relate to climate change adaptation and/or the forest sector. Samoa already has a suite of projects to address the needs of climate change adaptation and resilience, many of which could inform the development of REDD+. Some of these are listed below. The contributions of some of these projects to REDD+ readiness components, alongside the relevance of core MNRE programmes and activities, are outlined in Table 7.

UNDP - Integration of Climate Change Risks and Resilience into Forestry Management in Samoa (ICCRIFS)

Climate change is exacerbating current environmental pressures on forest resources due to clearing and encroachment in natural forests, unsustainable land-use practices and a lack of understanding of the impacts of climate change. This project aims to demonstrate resilient agro-forestry and forestry techniques, to integrate climate change risks into forestry frameworks, and to disseminate lessons learned. It will commence in 2011 and has total donor funding of USD \$4.5 million.

Mount Vaea Restoration Project – Control of Invasive Species

This project is a partnership between JICA, CI, MNRE and SPREP. It is the first project to explore practical tools for control of invasive species in Samoa and other PICs and has been in operation since 2008. The project has conducted a terrestrial biodiversity survey of Mount Vaea Reserve and is now piloting methods to eradicate the five main invasive species. The ultimate objective is to establish viable techniques to eliminate invasive species and restore native forest cover. Funding is required to pay local communities to clear weeds and plant

natives. This approach to forest restoration may be a key part of a national REDD+ strategy (see 'Island REDD', Annex I).

MRV System Installation Project for Samoa

This project is funded by the Government of Japan and implemented by MNRE. It aims to create a land-use and forest cover map of Samoa using satellite images and aerial photos. It is currently the only project with objectives explicitly related to REDD+. It will also measure forest carbon stocks. Project period is June 2011–March 2013 and the total budget is USD \$3.45 million.

Functional Enhancement Project on Sustainable Forest Management (SFM) in Restricted Forests in Samoa

This project is funded by the Government of Japan and implemented by MNRE. The project will facilitate conservation of forests in national parks and reserves, including the management of invasive species. This project builds on an earlier JICA-supported project, "The Project for Enhancing Management Capacity for National Parks and National Reserves (Samoa)" from March 2007–September 2010.

Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (MESCAL), IUCN

The MESCAL project focuses on five Pacific Island countries (Fiji, Samoa, Solomon Islands, Tonga and Vanuatu). Its objective is to help governments and local people to effectively manage their mangrove resources through such measures as improved GIS systems, resource valuation and governance.

UNDP/GEF Small Grants Program Pilot on Community-Based Adaptation

UNDP in Samoa administers a pilot Community-based Adaptation (CBA) Programme. This is a five-year UNDP global initiative funded by the Global Environment Facility (GEF) Small Grants Program. The CBA programme supports a range of community-initiated projects aimed at reducing coastal erosion and increasing community resilience to flooding and sea level rise, such as afforestation, mangrove planting and establishing Special Management Areas to protect mangroves. AusAID provides co-financing for projects. These projects could provide useful lessons for REDD+, presenting an opportunity to leverage funding and financial rewards for these activities (see 'Bio-shield REDD', Annex I). Although the current pilot program will end in 2012, UNDP has applied to GEF to convert the pilot project into a regional programme.

AusAID Capacity Building Program for Strengthening Community Forestry and Agro-forestry

The program will focus on basic competencies required for forestry personnel and field officers in enhancing community-based forest management. The competencies include establishing community forests and participatory forest management plans, and supplementary competencies for facilitating participatory learning, managing conflict, and good governance. This project proposal is currently in the approval process.

Table 7: Relevance of Samoa forest sector activities to REDD+ readiness components

REDD+ readiness components	Past and current activities relevant to REDD+ readiness
Component 1: <i>Management of the REDD+ readiness process</i>	Samoa has experience in establishing a National Climate Change Country Team.
Component 2: <i>Stakeholder Engagement</i>	No direct relevant experience to date.
Component 3: <i>Implementation Framework</i>	Integrated land use planning: ‘Reef to Ridge’ Sustainable Management Plans. These plans are developed under section 4 of the <i>Planning and Urban Management Act 1994</i> , which allows plans to be applied to non-urban areas.
Component 4: <i>REDD+ Strategy Setting</i>	<ul style="list-style-type: none"> • UNDP - Integration of Climate Change Risks and Resilience into Forestry Management in Samoa • Functional Enhancement Project on Sustainable Forest Management (SFM) in Restricted Forests in Samoa (national parks and reserves), funded by Government of Japan • Invasives: Mount Vaea Reserve weed eradication project • Mangroves: Conservation International’s work on ‘bio-shields’, i.e. mangrove buffers, to protect against tsunamis and erosion • IUCN’s MESCAL project in Samoa, on mangrove ecosystem for climate change and livelihoods, includes components on developing baseline mangrove information systems • Cross-sectoral engagement: Samoa Energy Policy.
Component 5: <i>Reference Scenario</i>	<ul style="list-style-type: none"> • Aerial photos from 1999 have provided a basis for forest and vegetation mapping. • Samoa Forestry Resource Information System (SamFRIS) Database, Samoa Forestry Division (2004), a mapping and GIS-based information system, has provided complete satellite image coverage of Samoa.²⁰ • MRV System Installation Project Samoa, funded by Government of Japan, implemented by MNRE.
Component 6: <i>National monitoring system</i>	MRV System Installation Project Samoa (Japan/MNRE) aims to install an MRV system for carbon. MRV system for social and environmental safeguards still required.

Output 2: Improved coordination of forest and other land-use sectors

The national REDD+ roadmap will be underpinned by an updated forest inventory and data management system, supported by the Government of Japan and implemented with the participation of local communities. Improved community forest management and participatory protected area management capacities will be essential preconditions to the achievement of REDD+ readiness.

²⁰ The SamFRIS Database was funded by FAO under the project “Strengthening the institutional capacity of the Samoa Forestry Division to effectively manage the country’s forestry resource”.

The coordination of REDD+ readiness with other related forest sector initiatives must be maintained through including the projects listed above in the readiness roadmap design and monitoring process, particularly the AusAID capacity building program and the ICCRIFS project. In the first year of REDD+ readiness activities, efforts under this output may be directed towards the following activities. Additional external support must be sought.

- **Strengthening of GHG inventory and reporting capacity of MNRE staff.** This will extend beyond the forest sector in order to effectively integrate all carbon accounting in the Land Use, Land Use Change and Forestry (LULUCF) in the national GHG inventory.
- **Community forest management capacity building,** including basic inventory and management planning skills, will be prioritised as an essential part of a national REDD+ strategy.
- **Participatory Protected Area management and piloting of Payment for Ecosystem Services (PES) systems.** Lack of financial incentives for behavioural changes among local stakeholders has been a significant impediment to the success of protected area management projects in recent years, in particular the JICA project for management of national parks 2007-10. The success of REDD+ will depend on an effective method of incentivising behavioural changes among forest sector stakeholders. Activities to pilot PES schemes alongside existing projects such as ICCRIFS and the new JICA project will therefore be proposed, along with an assessment of the prospects for private sector investment in PES.

Output 3: Development of forest management options

REDD+ Readiness component four, *REDD+ Strategy Setting*, requires the development of priorities for the forest sector. This will be achieved by collecting accurate data and conducting needs assessment analyses for forest governance and management reform. This will include opportunity cost analyses, vegetation change analyses, and research into the practical actions that may be undertaken under a REDD+ strategy. Priority areas include:

- **Land-use change and opportunity cost analysis of land-use options,** including valuation of the multiple benefits of ecosystems. Supported by the Government of Japan's MRV installation project.
- **Vegetation change analysis,** with an emphasis on the spread of invasive species and potential control mechanisms, in partnership with the CI/JICA/MNRE Mt Vaea restoration project (see 'Island REDD', Annex I).
- **Mangrove restoration pilot programme** (see 'Bio-shield REDD', Annex I). Further work involving mangroves is planned under IUCN's MESCAL project.

These priorities are selected because of their general relevance across the PICs as well as their potential relevance to REDD+ strategies. Indeed, invasive species control and mangrove ecosystem restoration and management are the two areas to which REDD+ must contribute if it is to have long-term relevance to the forest sector in the Pacific region (see Annex I). Additional external support must be sought to implement activities under this output, as is the case with Output 2 above.

Annex A: Scoping Mission Itinerary, 14–29th March, 2011

Monday 14th – Friday 18th March (Niue)

Time	Meeting	Participants	Venue
All day	Pacific Climate Change Roundtable (PCCR)	Organised by SPREP and Government of Niue, participants from 22 PICTs, donor agencies, international NGOs and civil society	Alofi, Niue

Thursday 17th March (Fiji)

Time	Meeting	Participants	Venue
1000-1200	Live and Learn Environmental Education (LLEE); voluntary REDD+ programmes	Robbie Henderson Morena Rigamoto Simione Koto Ratu Josefa Lalabalavu	LLEE Country Office, Suva

Friday 18th March (Fiji)

Time	Meeting	Participants	Venue
1000-1100	WWF South Pacific Programme	Charlie Avis	WWF Programme Office, Suva
1110-1210	Conservation International; Forest Carbon Offset Project with Fiji Water	Isaac Rounds	CI Country Office, Suva
1400-1600	University of South Pacific (USP)	Dan Orcherton Morgan Wairie	Laulala Campus, Suva

Monday 21st March (Fiji)

Time	Meeting	Participants	Venue
0900-1200	Launch of LLEE EU-funded REDD+ pilot project	Consultant team attended	Conference Hall, Suva
1210-1300	UNDP Multi-Country Office (MCO); Briefing for MCO Environment Unit	Toily Kurbanov Sainimili Nabou Emma Mario Floyd Robinson Laiakini Waqanisau	UNDP MCO, Suva

Tuesday 22nd March (Fiji)

Time	Meeting	Participants	Venue
0930-1030	Fiji Government Department of Forestry; Briefing	Samuela Lagataki Kirti Chaya	Dept of Forestry, Takayawa Building, Suva
1100-1200	SPC Land Resources Division (LRD) and GIZ	Sairusi Bulai Hitofumi Abe Jalesi Mateboto Cenon Padolina Karl Kirsch-Jung Christine Fung	SPC LRD, Nabua, Suva
1200-1300	JICA; Coordination and Briefing	Hitofumi Abe Masahiro Ito Nila Prasad	JICA Country Office, Suva

Tuesday 22nd March (Samoa)²¹

Time	Meeting	Participants	Venue
0930-1130	UNDP MCO, FAO and UNEP; Briefing	Mihoko Kumamoto Louison Dumaine Laulusa	UNDP MCO, Apia
1130-1200	UNDP MCO; Briefing with Resident Representative	Nileema Noble Mihoko Kumamoto, Gabor Vereczi	UNDP MCO, Apia

Wednesday 23rd March (Samoa)

Time	Meeting	Participants	Venue
0930-1030	JICA; Technical consultation	Manabu Aiba Naoko Laka Mihoko Kumamoto	JICA Country Office, Apia
1100-1200	UNESCO Office for the Pacific States	Akatsuki Takahashi Kevin Petrini	UNESCO Office, Apia
1400-1500	SPREP: Technical and Coordination Meeting	David Sheppard Netatua Pelesikoti Espen Ronneberg Easter Galuvao Nixon Kua Taito Nakalevu	SPREP HQ, Apia
1515-1700	Conservation International; Technical consultation	James Atherton	Conservation International Office, Apia

Thursday 24th March (Samoa)

Time	Meeting	Participants	Venue
0830-0930	UNDP GEF-Small Grants Programme; Consultation meeting	Richard Crichton Ollie Reupena	GEF SGP Office, Apia
1000-1200	Samoa Government Ministry of Natural Resources and Environment (MNRE); Briefing and consultation	Taupau Maturu Paniani Mulipola Ausetalia Titimaea Tolusina Pouli Steve Brown Mihoko Kumamoto	MNRE Forestry Division, Apia
1500-1600	Pacific Alliance of Development Journalist (PADJ); Consultation	Cherelle Jackson	UNDP MCO, Apia
1630-1730	Samoa Umbrella of Non-Government Organisation (SUNGO); Consultation	Roina Vavatau Taufao Raymond Voigt High Chief Va'aisili	SUNGO Office, outside Apia

Friday 25th March (Samoa)

Time	Meeting	Participants	Venue
0930-1600	Field visits; Mt. Vaea Forest Reserve, Ole Pu Pue National Park, Vaiusu Marine and Mangrove Conservation Project.		

Sunday 27th March (Fiji)

Time	Meeting	Participants	Venue
0930-1130	Field Visit to Future Forests Fiji (FFF) Teak Plantation	Reshmi Chand	Ra, North Coast, Viti Levu

²¹ The team experienced Tuesday 22nd March 2011 twice, after crossing the international date line between Fiji and Samoa.

Monday 28th March (Fiji)

Time	Meeting	Participants	Venue
0900-1000	IUCN; Coordination meeting and briefing	Taholo Kami Bernard O'Callaghan Christine Trenorden	IUCN Oceania Office, Suva
1000-1100	IUCN- Pacific Mangrove Initiative/ MESCAL; Consultation	Tim Nolan Steven Edding	IUCN Oceania Office, Suva
1100-1200	Fiji Environmental Lawyers Association; Consultation	Maria Goreti-Muavesi Christine Trenorden James Sloan	IUCN Oceania Office, Suva
1400-1500	SPC and GIZ; Debriefing	Sairusi Bulai Hitofumi Abe Cenon Padolina Jalesi Mateboto Wolf Forstreuter Vinesh Prasad Karl P. Kirsch-Jung	SPC Narere Office, Suva

Tuesday 29th March (Fiji)

Time	Meeting	Participants	Venue
0930-1030	UNDP MCO Environment Team; Debriefing and follow-up discussion	Emma Mario Laiakini Waqanisau Losana Mualaulau	UNDP MCO, Suva
1100-1300	JICA and Embassy of Japan in Fiji; Debriefing	Takato Maki Hideaki Kuroki Masahiro Ito Hitofumi Abe	Embassy of Japan, Suva
1400-1500	GIZ Debriefing	Christine Fung	Holiday Inn, Suva

Annex B: Persons Contacted During Scoping Mission

Organisation	Name	Position	Email	Met in
350.org	Aaron Packard	Pacific Coordinator	aaron@350.org	Niue
ADB Climate Change Coordination Unit	Saveis Joze Sadeghian	Climate Investment Funds Manager	sjsadeghian.consultant@adb.org	Niue
	Marc Overmars	Climate Change Specialist	movermars.consultant@adb.org	Niue & Fiji
AusAID	Ryan Medrana	First Secretary (Climate Change)	ryan.medrana@ausaid.gov.au	Niue
Carbon Partnership Ltd	Sean Weaver	Principal	sean.weaver@carbon-partnership.com	Fiji
Conservation International	Terry Hills	Advisor - Adaptation	thills@conservation.org	Niue
	James Atherton	Conservation Outcomes Manager, Pacific Islands Programme	jatherton@conservation.org	Samoa
	Isaac Rounds	Forest Ecologist – Fiji Country Programme	i.rounds@conservation.org	Fiji
Department of Climate Change and Energy Efficiency, Australia	Anne Giles	Assistant Director, International Adaptation Strategies Team	anne.giles@climatechange.gov.au	Niue
Department of Commerce, Industry and Environment, Nauru	Mavis Depaune	PACC Coordinator, Environment Division	mavis.dupaune@naurugov.nr	Niue
Department of Environment, Fiji	Kirti Chaya	2 nd National Communication UNFCCC Project Coordinator	kirti.chaya@environment.gov.fj	Fiji
Department of Environment, Niue	Sauni Tongatule	Director	Sauna.tongatule@mail.gov.nu	Niue
Department of Foreign Affairs, FSM	Jackson Soram	Deputy Assistant Secretary	jtsoram@mail.fm	Niue
Department of Forestry, Fiji	Samuela Lagataki	Deputy Conservator of Forests	samuella_lagataki@yahoo.com	Fiji
Embassy of Japan in Fiji	Takatu Maki	First Secretary, Economic Cooperation	takato.maki@mofa.go.jp	Fiji
	Hideaki Kuroki	Second Secretary	hideaki.kuroki@mofa.go.jp	Fiji
EU Delegation for the Pacific	Cristina Casella	Regional Integration, Natural Resources and Environment	cristina.casella@cc.ewpa.eu	Niue & Fiji
FAO Pacific Regional Office, Samoa	Louison Dumaine Laulusa	FAO Education Consultant	louison.dumainelaulusa@fao.org	Samoa
Fiji Environmental Law Association (FELA)	Maria-Goreti Muavesi	Environmental Lawyer and Coordinator	maria-goreti.muavesi@fela.org.fj	Fiji
	James Sloan	Chariman	james.sloan@fela.org.fj	Fiji
Future Forests Fiji	Roderic Evers	Managing Director	roderic@fff.com.fj	Fiji
	Reshmi Chand	Nursery Manager	nursery@fff.com.fj	Fiji
Geoscience Australia	Trevor Jones	Strategic Advisor	trevor.jones@ga.gov.au	Niue
	Stuart Ross	Director - ICT	stuart.ross@ga.gov.au	Niue
German Agency for International Cooperation (GIZ)	Christine Fung	Land Use Planning and Facilitation Specialist	christine.fung@giz.de	Niue & Fiji
	Karl-Peter Kirsch-Jung	Team Leader, SPC/GIZ Regional Programme	karl-peter.kirsch-jung@giz.de	Niue & Fiji

IUCN Oceania	Padma Narsey Lal	Chief Technical Adviser	padma.lal@iucn.org	Niue
	Taholo Kami	Regional Director	taholo.kami@iucn.org	Fiji
	Christine Trenorden	Environmental Law Mentor	Christine.trenorden@iucn.org	Fiji
	Tim Nolan	MESCAL Programme Manager	tim.nolan@iucn.org	Fiji
	Steven Eddie	Intern, Climate Adaptation	Steven.eddie@gmail.com	Fiji
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Annex C: National Legal and Policy Frameworks and REDD+ Readiness in the Government of Japan's Priority Countries

In addition to developing overarching regional REDD+ policy and strategy for the Pacific, each country that wishes to engage in a national-level REDD+ readiness process will need to review and potentially revise its own national legal, policy and institutional frameworks.

Annex C contains a summary of the legal, policy and institutional framework in six of the countries that this project supports (the information for Samoa is presented above), as a first-order assessment for each country of the current and/or potential relevance of activities under the six components of REDD+ Readiness (see Table 8). At the regional level, experiences and lessons could be shared regarding the following issues:

Updating forestry legislation

Some countries have outdated and incomplete forestry legislation (e.g. Samoa: *Forests Act 1967*; Solomon Islands: *Forest Resources and Timber Utilisation Act 1967*), significantly hampering the sustainable management of forestry resources. Other countries lack forestry legislation due to their small forest areas (e.g. Kiribati, Marshall Islands and Palau). In Fiji, forestry operates under the *Forest Decree 1992*. Fiji has recently announced a review of this legislation.

Addressing the implications of customary land tenure

It does not follow that the high degree of customary land ownership in the PICs will facilitate REDD+. Indeed, during the scoping mission, many commentators noted that one of the main stumbling blocks for REDD+ in the Pacific was likely to be the issue of land ownership. The prevalence of customary land tenure in the Pacific often gives rise to disputes over land ownership or land boundaries which will create difficulties in land-use planning and in establishing the clarity of rights and tenure essential for successful REDD+ implementation. In some countries, strong customary land tenure is not always reflected in actual control over forest resources, as control may be delegated to a government body (e.g. in Fiji, once native lands are identified, they are largely controlled by the NLTB).

Customary decision-making processes

These may also need to be reviewed. For example, some countries have passed legislation which gives legal recognition to customary-decision making structures over local affairs (e.g. Samoa: *Village Fono Act 1990*; Tonga: *Fonos Act 1924*). However, such structures do not always facilitate broad-based community involvement in decision-making, and may fail to include women, youth or elders. The social safeguards for REDD+ are likely to require that these processes are open, transparent and are consistent with the principle of gender equity.

Benefit sharing systems

No PICs currently have legally established systems for Payments for Ecosystem Services (PES). The prevalence of customary land ownership may also present challenges in the design of benefit sharing systems due to potential difficulties in identifying land ownership and group membership. However, there are examples of informal or *ad hoc* PES schemes

that may inform the development of equitable benefit-sharing systems under REDD+. IUCN's Pacific Regional Office identifies the tourism industry and watershed management in Fiji as sources of lessons for national REDD+ benefit sharing systems, as well as the voluntary REDD projects under development between Fiji Water and Conservation International.

Absent or weak land- use planning processes

Although most target countries have some form of land-use planning in urban areas, most do not have such legislation for non-urban areas. Some countries have land-use planning legislation that is sufficiently flexible to be used for conservation purposes (e.g. Palau: *Land Planning Act*).

Protected areas

Only three of the seven countries surveyed have dedicated legislation for the establishment and maintenance of protected areas, namely:

- Palau (*Protected Area Network Act 2003*)
- Samoa (*National Parks and Reserves Act 1974*)
- The Solomon Islands (*Protected Areas Act 2010*)

Fiji

Country overview

Fiji is an island group consisting of 322 islands and coral atolls, of which about 100 are inhabited. Fiji has a total land area of 18,272 km². Its population density of 83 people/km² is relatively low compared to other PICs. 48% of the population lives in rural areas.²² In 2008 it had a per capita income of USD \$4,358, with an annual economic growth rate of 0.2%.

Status of forest resources

Fiji has a country area of 1,827,000 ha, of which 1,014,000 ha (56%) is forest. The majority of this, 656,000 ha, is closed forest, while 388,000 ha are classified as open forest, and 176,000 ha are pine/hardwood plantations (mahogany). It is estimated that Fiji currently has about 38,000 ha of mangroves, and is losing approximately 200 ha/year.²³ Carbon stock estimates for forest types are not yet available.

The vast majority of forest is held under customary tenure, with only a small proportion held under freehold and by the state.²⁴ Since 1990, land ownership has slowly been shifting from state ownership to customary ownership in accordance with a long-term strategy by the government to return land acquired by the state when Fiji was a British colony.

The main drivers of deforestation and forest degradation are clearing for agricultural expansion and high intensity selective logging of native forests, respectively.²⁵ Other drivers

²² Most statistics for this review were taken from FAO (2010), Global Forest Resources Assessment, Country Report: Fiji.

²³ FAO (2010), Country Report: Fiji, p 21.

²⁴ *Ibid.* p. 11. The report notes that there is some discrepancy in the exact figures for the land tenure categories.

²⁵ Fiji REDD Policy Scoping Report (2009), p 9.

and threats include increased use of fuel wood by manufacturing industries for hog fuel, and the prevalence of invasive species.

Relevant legal provisions

Fiji is a constitutional democracy. However, on 10 April 2009, the President of Fiji abrogated (annulled) Fiji's 1997 Constitution, and consequently Fiji is currently ruled by decree. It has an Interim President, Interim Prime Minister and an Interim Cabinet.²⁶

Forest regulation

Forestry is regulated under the *Forest Decree 1992* and in accordance with the 2007 National Forest Policy. However, as part of its REDD+ readiness process, Fiji is preparing a new Forest Decree 2011, which will address sustainable forest management and carbon financing. Forest legislation and policy are administered by the Department of Agriculture, Fisheries and Forests.

Land tenure

The land interests of native Fijians (*mataqali*), i.e. those who have the customary right to occupy and use native lands, are identified and regulated under the *Native Lands Act [Cap 133]*. Approximately 89% of land in Fiji is held as customary land (FAO, 2010 and PIFS, 2008). Land identified as customary land is administered by the Native Lands Trust Board (NLTB) under the *Native Lands Trust Act [Cap 134]*, which is empowered to enter into leases and licences on behalf of native landowners. Leases and licences can only be granted with the consent of the majority of landowners. The NLTB effectively controls the use of native land, including the management rights to forests, and is a key stakeholder in the development of REDD+ readiness.

In June 2010, the Interim Cabinet approved a *Land Use Decree 2010* which may have implications for REDD+. The Decree establishes a Land Use Unit within the Ministry of Lands and Survey, empowered to issue leases over both crown and native land for up to 99 years. The Land Use Unit can only use land that has been identified as being available for use by native title landowners, and who have given their consent. The purpose of the Decree is to overcome the delays in leasing land under the existing native land legislative regime.

Protected areas/Biodiversity protection

Biodiversity is protected under the *Endangered and Protected Species Act 2002* and the *Endangered and Protected Species Regulations 2003*. However, there is no comprehensive legislation in Fiji for the establishment and maintenance of protected areas. Fiji is a signatory to the CBD and prepared a National Biodiversity Strategy and Action Plan in 2007, which earmarks certain areas in Fiji for conservation. Forests in the Navua gorge area are recognized as a wetland site of international importance under the RAMSAR convention.

²⁶ Fiji has been suspended from the Pacific Islands Forum since May 2009. It is expected that elections will be held in 2014.

International legal obligations

Fiji is a signatory to the *Convention Concerning Indigenous and Tribal Peoples in Independent Countries* 1989 (ILO 169), which requires signatories to ensure the free, prior, informed consent of indigenous people is given to development proposals. In addition to the CBD (see above), Fiji is also a signatory to the 1969 Convention on the Elimination of All Forms of Racial Discrimination, the 1979 Convention on the Elimination of Discrimination Against Women, the 2003 United Nations Convention against Corruption and the United Nations Convention on Combating Desertification – all of which contain provisions of relevance to REDD+.

Activities of development partners relevant to REDD+ readiness

Of the seven target countries in the UN-REDD Pacific Project, Fiji is the most advanced in terms of REDD+ readiness. With support from the SPC/GIZ project, Fiji has prepared and adopted a REDD+ Policy (February 2011) (Phase 1). It is now preparing a more detailed National REDD+ Strategic Action Plan (Phase 2). Fiji is also developing a Forest Carbon Finance Guideline, which is expected to be ready by end April 2011. The Fiji REDD+ Programme aims to achieve national REDD readiness by 2012.²⁷

Components of REDD+ Readiness	Past and Current Activities
Component 1: <i>Management of the REDD+ readiness process</i>	Fiji is establishing a REDD+ Steering Committee (to be chaired by Forestry), comprised of representatives from the Departments of Environment and Agriculture, Native Land Trust Board, private sector, Fiji Pine, an international NGO, a resource/landowner representative, and a representative from USP/Fiji National University.
Component 2: <i>Stakeholder engagement</i>	Fiji's REDD-Plus Policy states that it will develop a transparent multi-stakeholder governance structure, which will be the REDD+ Steering Committee. (However, in the current political situation in Fiji whereby the Constitution has been abrogated and the country is ruled by decree, stakeholders lack confidence to participate).
Component 3: <i>Implementation framework</i>	Addressed under the SPC/GIZ 'Coping with Climate Change in the Pacific Island Region' project.
Component 4: <i>REDD+ strategy setting</i>	A REDD+ strategy/roadmap is being prepared with support from the SPC/GIZ 'Coping with Climate Change in the Pacific Island Region' project. Fiji currently proposes to adopt a 'hybrid' approach to REDD+ which will enable both national and sub-national/project scale REDD+ activities.
Component 5: <i>Reference scenario</i>	To be addressed by the SPC/GIZ 'Coping with Climate Change in the Pacific Island Region' project, with assistance from SOPAC.
Component 6: <i>National monitoring system</i>	To be addressed by the SPC/GIZ 'Coping with Climate Change in the Pacific Island Region' project.

²⁷ For more information on the REDD+ readiness process in Fiji, see: Fiji REDD Policy Scoping Report, September 2009, prepared by Weaver, Herold and Payton, for SPC/GIZ; and Inception Workshop and Regional REDD+ Strategy Framework Development Report, February 2011, compiled by Carbon Partnership Ltd for SPC/GIZ.

GIZ and REDD+ in Fiji

Coping with Climate Change in the Pacific Island Region

REDD+ readiness activities in Fiji are supported under the “*Coping with Climate Change in the Pacific Island Region*” (CCCPiR) project.²⁸ This project supports a regional program of technical cooperation to assist Fiji, Tonga and Vanuatu to integrate climate change into their strategies and policies on agriculture, forestry and land-use. This project is funded by the Government of the Federal Republic of Germany through the Federal Ministry for Economic Cooperation and Development (BMZ), and is implemented jointly by GIZ with SPC. The project runs from January 2009 to 2014, and has funding of €14.2 million.

Climate Protection through Forest Conservation in the Pacific Island Countries

Fiji is being supported to participate in the development of a regional REDD+ strategy in the Pacific under the SPC/GIZ project entitled “*Climate protection through forest conservation in the Pacific Island Countries*”. This project is funded by the International Climate Initiative (ICI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), and has as its main focus the development of a regional REDD+ strategy. This project covers Fiji, Papua New Guinea, Solomon Islands and Vanuatu. The regional project will receive funding of €4.9 million over a four-year period from November 2010 to October 2014.

Stakeholders

In addition to government stakeholders and customary landowners, there are many non-governmental agencies, faith-based organizations, and private sector stakeholders that may wish to engage with REDD+ in Fiji. Non-government stakeholders include:

- Birdlife International
- Conservation International
- Live & Learn Environment Education
- Fiji Environmental Law Association
- Nature Fiji – MareqetiViti
- Viti Landowners Association
- Wildlife Conservation Society
- WWF South Pacific Programme

Faith-based organizations: the Fiji Council of Churches and the Methodist Church in Fiji and Rotuma.

Private sector stakeholders: Future Forests Fiji (teak plantations), Fiji Pine Limited, and the Fiji Hardwood Corporation.

²⁸ Before January 2011, this project was called “Adaptation to Climate Change in the Pacific Island Region” (ACCPiR).

Kiribati

Country overview

Kiribati comprises 33 coral atolls in three main groups of islands: the Gilbert, Phoenix and Line Islands. Only 21 islands are inhabited. Although Kiribati has a total land area of 811 km², this is dispersed across an Exclusive Economic Zone of 3.5 million km². Kiribati has a population of nearly 90,000 people, with an annual growth rate of 1.7% and a population density of 20 people/km². About 56% of the population lives in rural areas.²⁹ In 2008, Kiribati had a per capita income of USD \$2,426, one of the lowest of the PICs (with only Tuvalu and PNG being slightly lower), with an annual economic growth rate of 3%.

Kiribati has few natural resources and is one of the least developed island nations in the Pacific. It is particularly vulnerable to the adverse effects of climate change, as many of its atolls are only 3-4 metres above sea level and are only a few hundred metres wide.³⁰ Most people live at a subsistence level, relying on coconuts, the pandanus tree, bwabwai (giant taro), breadfruit and banana.

Status of forest resources

Approximately 80% of Kiribati's total land area of 81,000 ha is covered by coconut. Only 12,000 ha, or 15% of the total land area, is classified as forest. Kiribati, along with Tonga, does not classify coconut groves as forest, which reduces its proportional forest area when compared to other PICs. Species in the forest area include wild fig, pandanus trees (used for mats, thatching and roofing), and mangroves (estimated in 1995 to total 258 ha). Kiribati's scarce forest resources are subject to degradation due to population pressure (demand for construction timber and fuelwood), conversion for housing and sand mining. With prolonged droughts, rising sea level and frequent storm surges, some areas of land are now being inundated with salt water. Many coconut trees in Kiribati have reached maturity and require replanting. There is no carbon stock assessment for Kiribati.

Relevant legal provisions

Kiribati is a democratic republic functioning under its own Constitution, within the Commonwealth. It achieved independence on 12 July 1979. It has a 46-member unicameral parliament (known as the *Maneaba ni Maungatabu*). The President is both the Head of Government and Head of State (*Te Beretitenti*) and appoints his or her own Cabinet.

Forestry laws

There is no specific forestry legislation in Kiribati. Rather, Kiribati's forest resources are managed under the *Environment Act 1999* and the 2007 amendment to this Act. Land degradation issues are also addressed in the *Land Planning Ordinance* and the *Foreshore and Land Reclamation Ordinance*.

²⁹ FAO (2010), Global Forest Resources Assessment, Country Report: Kiribati.

³⁰ The threats to Kiribati from climate change and its adaptation needs are set out in Kiribati's National Adaptation Program of Action, prepared in January 2007.

Land tenure

In Kiribati, 50% of land is owned by customary landowners, the I-Kiribati, with the main landowning unit being the *kaalinga* (extended family unit). Rights to land vary and can include rights to own land, use land, or to access land to gather fruits.

Protected areas

Kiribati is a party to the CBD, and in 2005 Kiribati submitted its National Biodiversity Strategy and Action Plan to the CBD COP. Kiribati has declared the Phoenix Islands archipelago and surrounding waters a protected area (the Phoenix Islands Protected Area, or PIPA), which is the largest marine protected area in the world.

International laws

Kiribati is a party to all 3 'Rio' Conventions (UNFCCC, UNCCD and CBD) and to the Convention on the Elimination of Discrimination against Women, but is not a party to the Convention on the Elimination of All Forms of Racial Discrimination or the 2003 United Nations Convention against Corruption.

Activities of development partners relevant to REDD+ readiness

Given Kiribati's size and extremely limited forest resources, REDD+ may not be economically feasible for Kiribati. However, there may be elements of REDD+ readiness which present opportunities for Kiribati, such as the opportunity to gain access to funds and technical assistance to undertake vegetation mapping.

Components of REDD+	Past and current activities
Component 1: <i>Management of the REDD+ readiness process</i>	Kiribati's National Adaptation Steering Committee managed the NAPA consultation process, supported by the Climate Change Study Team. This experience would be directly relevant to the management of a REDD+ readiness process.
Component 2: <i>Stakeholder engagement</i>	National consultations under the NAPA process.
Component 3: <i>Implementation framework</i>	No directly relevant experience to date.
Component 4: <i>REDD+ strategy setting</i>	The conservation and enhancement of mangrove stocks may be an element of REDD+ which is of interest to Kiribati. The Ministry of Environment, Lands and Agriculture Development (MELAD) is currently replanting mangroves on the capital island of South Tarawa and plans to extend mangrove replanting to outer islands. In 1997, Kiribati developed a Mangrove Management Plan, although this was never implemented.
Component 5: <i>Reference scenario</i>	None at present. SOPAC has completed vegetation mapping of 75% of Kiribati, at a scale of 1:10,000. This will be completed within 2011. By comparing these with vegetation maps from the 1970s, it may be possible to draw up a first estimate of a potential reference level for Kiribati.
Component 6: <i>National monitoring system</i>	See above.

Republic of the Marshall Islands (RMI)

Country overview

The Marshall Islands is a collection of 29 atolls with over 1,000 islands spread over a vast distance in the north-central Pacific. It has a very small total land area of 18 km². The population is approximately 54,000, with a low population growth rate due to emigration to the USA. Marshall Islands has one of the highest population densities in the Pacific with 339 people/km². Approximately 30% of the population lives in rural areas.³¹ In 2008 it had a per capita income of USD \$2,500, one of the lowest among the PICs. Marshall Islands is heavily dependent on compensation payments for the adverse impacts of nuclear testing and external assistance from the USA, which make up nearly 70% of fiscal revenue.

In response to an energy crisis in 2008, Marshall Islands produced a detailed National Energy Policy and Energy Action Plan in 2009. Funded by the EU, this plan aims to shift reliance away from oil towards practical and renewable energy sources such as locally-produced biofuels, which may have implications for REDD+.

Status of forest resources

Marshall Islands covers an area of 18,000 ha, of which 13,000 ha (70%) is forest. Much of the vegetation on the atolls is coconut, which has replaced the native vegetation and is used for copra production. As of 2008, Marshall Islands was estimated to have 163 hectares of mangroves. Although high quality vegetation mapping was conducted in 2008, there is no time series data available, so it is not possible to identify trends in changes in forest cover in Marshall Islands.

Relevant legal provisions

Marshall Islands is an independent country in a Compact of Free Association with the USA. The Compact came into force in 1986 and expires in 2023. The country has a semi-Westminster style constitution, adopted in 1979. It has a national Parliament (Nitijela) with 33 members, elected every 4 years. The President is the Head of State and is elected from the Nitijela. The President appoints a Cabinet from the members of Parliament. There is also an advisory council of High Chiefs, the Council of Iroij.

Legislation relevant to REDD+ includes:

- *Coast Conservation Act 1988 [Title 35 Cap 4]*
- *Endangered Species Act 1975 [Title 8 Cap 5]*
- *National Environmental Protection Act 1984 [Title 35 Cap 1]*
- *Planning and Zoning Act 1987 [Title 10 Cap 2]*
- *Public Lands and Resources Act [Title 9 Cap 1]*

As with Kiribati, there is little large-scale natural resource development in Marshall Islands, and consequently there is no legislation dealing with forestry or mining.

³¹ FAO (2010), Global Forest Resources Assessment, Country Report: Kiribati.

Customary land tenure

Respect for customary law and recognition of traditional management structures is embedded throughout RMI's Constitution, which preserves traditional rights of land tenure (Art X). This is reflected in the fact that more than 99% of land in Marshall Islands is held as customary land. Land is divided into sections which run from lagoon to ocean, called "wetos", which are held communally or by lineage, with overlapping classes of interests. The majority of land is inherited matrilineally.

International legal obligations

The Marshall Islands is a party to the CBD and the Convention on the Elimination of Discrimination against Women, and it is currently preparing to ratify the 2003 United Nations Convention against Corruption.³² It is not a party to the Convention on the Elimination of All Forms of Racial Discrimination.

Activities of development partners relevant to REDD+ readiness

Components of REDD+ Readiness	Past and current activities
Component 1: <i>Management of the REDD+ readiness process</i>	No relevant experience to date.
Component 2: <i>Stakeholder engagement</i>	No relevant experience to date.
Component 3: <i>Implementation Framework</i>	No relevant experience to date.
Component 4: <i>REDD+ Strategy setting</i>	The Micronesia Challenge is a commitment by five countries: Federated States of Micronesia, Marshall Islands, Palau, Guam and Commonwealth of the Northern Mariana Islands to conserve at least 30% of near-shore marine resources and 20% of terrestrial resources across Micronesia by 2020. ³³
Component 5: <i>Reference scenario</i>	High quality vegetation mapping using satellite imagery from 2003-2006 was carried out in 2008, including biomass and carbon stock estimates (Liu and Fischer, in press). No other inventory data exists, so it is not possible to establish a trend in forest cover/carbon stock change.
Component 6: <i>National monitoring system</i>	See above.

Stakeholders

In addition to governmental stakeholders and customary landowners, non-governmental agencies which may potentially be interested in REDD+ include the Marshall Islands Conservation Society, Women United Together in Marshall Islands, and the College of the Marshall Islands.

³² See UNDP Press Release describing preparations for ratification of UNCAC in Marshall Islands at <http://www.undppc.org.fj/pages.cfm/newsroom/press-releases/2011/nitijela-speaker-calls-ratification-un-convention-against-corruption-by-marshall-islands.html>

³³ The Micronesia Challenge has 14 groups/organizations on its regional support team, including TNC, CI, Micronesia Conservation Trust, SPREP, SPC and SOPAC. It is partly funded by the David and Lucille Packard Foundation. For more information, see <http://www.micronesiachallenge.org/>

Palau

Country overview

The Republic of Palau is a vulnerable small island developing state. It is composed of a diverse network of coral reefs and a chain of more than 300 raised limestone and volcanic islands. The largest island is Babeldaob, which contains the capital, Koror. Palau has one of the smallest land areas in the Pacific, with a total land area of 458 km². As of 2009, it had a population of approximately 20,397 people, with a population density of 43 people/km². 20% of the population lives in rural areas, relatively low compared to the rest of the Pacific.³⁴ In 2008, it had one of the highest per capita incomes among PICs (USD \$8,100). In addition to grant money from the USA, Palau also generates income from a Trust Fund established at independence, which is valued at over USD \$140 million.

Status of forest resources

Palau has country area of 46,000 ha, of which 40,000 ha (88%) is forest, although this is an unreliable figure as the categorizations used for forest types are not in accordance with FAO forest categories. Palau's land area has experienced widespread disturbance due to the mining of bauxite, military action during World War II which denuded much of Peleliu and Angaur, and conversion of forest for agriculture. There is an overall trend towards forest expansion, although this has been reversed recently due to construction of a new capital on Babeldaob, which required widespread land clearing and a new road circumnavigating the island. Palau has an estimated 4,608 ha of mangroves. There is no data available to indicate any trend in mangrove cover.

Relevant legal provisions

The Republic of Palau is an independent country in a Compact of Free Association with the United States, which expires in 2044. The Palau National Congress (Olbiil era Kelulau) has two houses: the Senate (9 members), and the House of Delegates (16 members). The President is both Head of State and Head of Government. The Council of Chiefs is an advisory body to the President on traditional laws and customs and contains the highest traditional chiefs from each of the 16 states.

Forestry laws

Palau does not have a national forest law.

Land tenure

Most land is considered to be 'public land'. Public lands typically have high forest cover and are generally administered and managed by the Palau Public Lands Authority (PPLA). The PPLA in turn holds the lands in trust for the people of the Republic of Palau. One type of 'public land' is *chutem buai* – land that is owned by individuals but have been given to the public for use by the larger community. The other is *chutem beluu* – land that belongs to the village as a whole and was traditionally managed by the High Chief of the village.

³⁴ FAO (2010), Global Forest Resources Assessment, Country Report: Palau.

Protected areas

Protected areas are regulated under the *Natural Heritage Reserves System Act 1991* and *Protected Area Network Act 2003*. Although there are many protected areas, all but one of the protected areas allow for multiple use.

International legal obligations

Palau is a party to the CBD and the United Nations Convention against Corruption. It is not a party to the Convention on the Elimination of All Forms of Racial Discrimination or the Convention on the Elimination of Discrimination against Women.

Activities of development partners relevant to REDD+ readiness

The extremely small land area of Palau makes it unlikely that REDD+ will be able to deliver realistic benefit to Palau. However, as with other Small Island States, there may be elements of REDD+ readiness which can assist Palau, such as access to vegetation mapping technology.

Components of REDD+ Readiness	Past and Current Activities
Component 1: <i>Management of the REDD+ readiness process</i>	No relevant experience to date.
Component 2: <i>Stakeholder engagement</i>	No relevant experience to date.
Component 3: <i>Implementation framework</i>	No relevant experience to date.
Component 4: <i>REDD+ strategy setting</i>	The strategy developed under the Micronesia challenge (see below) will be valuable experience for a REDD+ strategy development process.
Component 5: <i>Reference scenario</i>	A preliminary assessment of land cover using satellite data was conducted in 2002. ³⁵
Component 6: <i>National monitoring system</i>	Not known.

Stakeholders

In addition to government stakeholders and customary landowners, non-governmental organizations which are active or potentially interested in REDD+ in Palau include: the Palau Conservation Society, the Palau International Coral Reef Centre, the Palau Community Action Agency, The Environment, Inc. Academic institutions include: Palau Community College.

International NGOs active in Palau include:

- **The Nature Conservancy**
- **Micronesia Challenge** (Refer to earlier discussion in the Marshall Islands profile).
- **Micronesia Conservation Trust:** The Trust supports biodiversity conservation and related sustainable development for the people of Micronesia in FSM, Palau, the Marshall Islands, Guam, and CNMI. It provides long-term funding through grant programmes (e.g. David and Lucille Packard Foundation, TNC, BMU, etc.) and has an annual turnover of approximately USD \$2 million. It has no REDD+ projects at present.

³⁵ Preliminary land cover assessment for the Republic of Palau, USDA Forest Service, cited in FAO (2010), Country Report: Palau, p 6.

Solomon Islands

This review is a desk study as the Consultant Team did not have an opportunity to visit Solomon Islands during its regional scoping mission to Fiji and Samoa in March 2011 due to budgetary constraints.³⁶

Country overview

Solomon Islands has a total land area of 28,890 km². In 2007, it had an estimated population of 508,000, and has one of the lowest population densities in the Pacific with 18 people/km². Solomon Islands has one of the highest proportions of population living in rural areas (82%) compared to the rest of the Pacific.³⁷

In 2008 it had a per capita income of US\$2,613, with an annual economic growth rate of 6.9%. The logging industry is by far the single most significant economic sector in Solomon Islands, contributing 67% of export earnings and 12-13% of government revenue. Officially, export earnings in 2007 were USD 110 million, though this is likely to be an underestimate due to under-reporting.

Status of forest resources in Solomon Islands

Solomon Islands has country area of 2,890,000 ha, of which 2.2 million ha (79% 76%) is forest, which is the second largest forest areas among the PICS (PNG has by far the largest, with 28,726,000 ha). Most of commercially exploitable areas have been logged. While deforestation rates in Solomon Islands are the highest in the South Pacific (2.2% / year), in absolute terms the area of deforestation is modest (440,000 ha in the period 1990-2000). The drivers of deforestation are conversion of natural forest to industrial plantation, especially oil palm; mining development and operations; and infrastructure development.

While the natural forest is a sunset industry, the forest plantation is considered a sunrise industry. Mention KFPL and EAGON Plantation- combined area of 25,000 ha. FSC certified. Village based forest plantations: 6,500 ha

Solomon Islands has approximately 37,000 hectares of mangrove (2010), showing a decline from 53,000 hectares of mangroves in 1990.

Relevant legal provisions

The Solomon Islands is a constitutional democracy and is a member of the Commonwealth. It gained independence in 1978. The Head of Government is the Prime Minister, and the Head of State is HM Queen Elizabeth II, represented by the Governor-General. The Solomons has a unicameral National Parliament of 50 members. The Prime Minister is elected by a simple majority of members of parliament. There are nine provinces with provincial assemblies, each led by a premier.

³⁶ For a more detailed assessment of REDD+ opportunities in the Solomon Islands, see the UN-REDD National Programme Document for the Solomon Islands, which was approved by the UN-REDD Policy Board in November 2010 and signed in March 2011.

³⁷ FAO (2010), Global Forest Resources Assessment, Country Report: Solomon Islands.

Forestry legislation

In the Solomon Islands, forestry is regulated under the *Forest Resources and Timber Utilisation Act 1969*, which is generally considered to be outdated and complex. Key governance issues preventing the sustainable management of forests in Solomon Islands include outdated legislation, , poor law enforcement, limited access to justice, saturated felling licenses and weak formal governance structures.

Although the Act recognises customary ownership of land, it does not adequately protect the rights of customary landowners. The Act contains a very complex process for determining whether or not customary land may be logged, with disputes often arising as to who are the true customary owners of the land and whether their consent has been given. Consequently, a significant number of forestry disputes have been brought before the courts. A Forest ACT 1999 to repeal *Forest Resources and Timber Utilisation Act 1969* was passed in Parliament, but was not gazetted and hence not been enforced.. A Forest Bill 2004 to repeal and replace both the 1969 and 1999 Acts was developed but was not presented in Parliament.

Customary land tenure

About 95% of land in the Solomon Islands is owned as customary land, with very little land being registered under the *Land and Titles Act*. The *Customary Lands Records Act* allows landholding groups to voluntarily register the boundaries of their land. It is not widely used due to a lack of administrative resources and the view of many landholders that registration is unnecessary and may lead to the alienation of land. Unlike Fiji and Vanuatu, the legislative framework in the Solomon Islands does not permit customary land to be leased. The ownership of land is closely connected to issues of development and the fair and equitable distribution of benefits from natural resources. Products of the land, such as trees, are owned by customary land owners.

Protected areas

In 2010, Solomon Islands Parliament passed the *Protected Areas Act 2010 and gazetted its subsidiary Regulations 2011*, thereby addressing the lack of a legal framework to formally protect land areas from logging. . The Act gives legal force to conservation agreements.

International treaties

The Solomon Islands is a party to all major international treaties (Rio Conventions, Convention on the Elimination of All Forms of Racial Discrimination, and the Convention on the Elimination of Discrimination Against Women), but it is not a party to the 2003 United Nations Convention Against Corruption.

Activities of development partners relevant to REDD+ readiness

Components of REDD+ Readiness	Past and Current Activities
Component 1: <i>Management of the REDD+</i>	A broad-based, multi-stakeholder national REDD+ working group will be established as an output of the UN-REDD Solomon

<i>readiness process</i>	Islands Programme.
Component 2: <i>Stakeholder engagement</i>	REDD+ stakeholders will have a comprehensive understanding of the potential benefits and risks associated with REDD+, to be achieved as one of the outputs of the UN-REDD Solomon Islands Programme.
Component 3: <i>Implementation framework</i>	Not yet fully addressed. FAO ACP-FLEGT Support Programme (US\$115,000).
Component 4: <i>REDD+ strategy setting</i>	Not yet addressed.
Component 5: <i>Reference scenario</i>	AusAID has previously funded two phases of a Forest Management Programme (2000-2004; and 2005-2009), now terminated. This programme focused on (i) Forest resource assessment, using satellite imagery; (ii) Preparation of operational maps; and (iii) Preparation of logging plans and data management of logging practices. The UN-REDD Solomon Islands Programme will carry out a capacity assessment for developing REL and MRV capacity.
Component 6: <i>National monitoring system</i>	See above.

UN-REDD Solomon Islands Programme: Support to Initial Readiness

Solomon Islands is one of the nine country partners in the UN-REDD Programme. The UN-REDD Policy Board approved the Solomon Islands National Programme Document in November 2010, which has a budget of US \$550,000 and commences on 1 July 2011 for a period of 18 months.

Climate Protection through forest conservation in the Pacific Island Countries

Solomon Islands is being supported to participate in the development of a regional REDD+ strategy in the Pacific under the SPC/GIZ project entitled “*Climate protection through forest conservation in the Pacific Island Countries*”. This project is funded by the International Climate Initiative (ICI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), and has as its main focus the development of a regional REDD+ strategy. This project covers Solomon Islands, along with the three other Melanesian countries, Fiji, Papua New Guinea and Vanuatu. Some REDD+ readiness activities will be carried out in the Solomon Islands under this program, although these are yet to be decided. The regional project will receive funding of € 4.9 million over a four-year period from November 2010 to October 2014.

Stakeholders

In addition to key governmental stakeholders such as the Ministry of Environment, Climate Change, Disaster Management and Meteorology and the Ministry of Forestry and Research, along with customary landowners, other key stakeholders in REDD+ include:

Governmental stakeholders

- **Public Solicitors Office (PSO)** – Landowners’ Advocacy and Legal Support Unit (LALSU).³⁸

Non-governmental agencies

- The **Development Services Exchange (DSE)**, which is a national umbrella NGO, representing the interests and coordinating the activities of all NGOs working on development issues.
- The **Lauru Land Conference of Tribal Communities** is a unique organisation in the Solomons. It was established in 1981 and is a community-based landowner structure which represents all landholders in Choiseul Province, and which in effect is the defacto government in Choiseul (rather than the Provincial Government). It is led by the Hon. Reverend Leslie Boseto and has representatives from all over Choiseul and has established its own ministries, laws and policies, has its own police force, and has been quite effective in achieving good conservation outcomes for the Province.
- The **Tetepare Descendants Association (TDA)** is a landowner group which manages the island of Tetepare, a 12,000 ha uninhabited island in Western Province. TDA is supported by the Solomon Islands Community Conservation Programme (SICCP), with the ultimate objective of assisting TDA to establish its own long-term sustainability. TDA has already entered into a Community Conservation Agreement with SICCP over Tetepare, which may soon receive legal recognition under the Protected Areas Act 2010. Under the Agreement, landowners are funded to carry out conservation activities, such as ranger activities and conservation education programmes. TDA is keen to consider developing a voluntary REDD+ pilot project for the island of Tetepare. Some minimal carbon accounting activities have commenced. SICCP is assisting TDA to find international funding to establish a REDD+ pilot project on Tetepare.
- The **Solomon Islands Community and Conservation Partnership (SICCP)**, which is working on six high-value conservation sites in the Solomons, mostly in Western Province. The most prominent of these is Tetepare. It is also working on *Southern Lauru Mangrove Reserve* in the south of Choiseul Island, which aims to protect the largest intact mangrove system in the Solomons, and also works with WWF – Solomon Islands on the *Kolombangara Reef to Ridgeline Biodiversity Reserve*.
- **Solomon Islands Development Trust**
- **Natural Resources Development Foundation Trust Board Incorporated (NRDF)**: NRDF has projects in Choiseul and Vella Lavella.
- **Kolombangara Indigenous Biodiversity Conservation Association.**

³⁸ The PSO is a body established under the Solomon Islands Constitution, which also guarantees its independence. The PSO has been very active over the past 20 years in providing legal education, advice and representation to landowners in the area of natural resource law, and in 2010 conducted legal education workshops for landowners on REDD+.

- **The Solomon Islands Indigenous Peoples Human Rights Advocacy Association (SIIPHRAA)**, SIIPHRAA promotes human rights awareness through networking in all 50 parliamentary constituencies.

Regional and international NGOs

- **Live & Learn**, which is an Australian NGO, working on environmental education issues as a means to reduce poverty. Their work is mainly focused in four provinces: Isabel, Rennell and Bellona, Makira-Ulawa and Choiseul. LLEE currently has and ADB funded REDD+ pilot project in Choiseul Province. Project duration is 18 months; funding of US\$250,000.
- **The Nature Conservancy (TNC)**, which has focused much of its work on Choiseul Province.
- **Transparency International National Chapter - Solomon Islands**
- The **World Fish Centre**, which has undertaken some activities related to REDD on mangrove forests.
- **World Wildlife Fund**, supports the Maetambe Project – Choiseul Island.
- **IUCN** Oceania Regional Office, through the MESCAL project.

Industry stakeholders

- The **Solomon Forestry Association (SFA)**, which has 39 members engaged in logging and processing activities. SFA is a registered trust established in 2007. It reconstitutes the earlier Solomon Islands Forestry Association, which became defunct in 1999. It can be difficult to identify logging operators in the Solomons as a new corporate entity is usually incorporated for each logging licence.

Tonga

Country overview

Tonga has a total land area of 748 km² covering 170 islands. It has a population of approximately 103,000, with a population density of 144 people/km² and a relatively high proportion of people living in rural areas (75%). Annual per capita income in 2008 was USD \$3,387, with an annual economic growth rate of 0.8%.

Status of forest resource

Only 9,000 ha (13%) of Tonga's land area is classified as forest in the national FRA, which is one of the smallest forest areas and lowest proportions of forest cover in the PICs. Of the 9,000 ha, 7,000 ha is forest, 1,000 ha is plantation, and 1,000 ha is mangroves. Much of the remaining land area (57%) is classified as 'Other land with trees', which refers to the country's extensive areas of coconut, but also includes mango, breadfruit, citrus, tava and sandalwood.³⁹ Most of Tonga's native dense tropical rainforest has been cleared for these plantations. The remaining fragments are under pressure from the local population for fuelwood collection and clearance for agriculture. Mangrove areas are threatened by encroachment from agriculture and property development. Tonga thus faces serious challenges to the sustainable management of its forest resources.

Relevant legal provisions

The Kingdom of Tonga is a constitutional monarchy, unique in the Pacific. It gained independence in 1970. The King is the Head of State and the Prime Minister is the Head of Government. The King presides over the Privy Council, which is made up of members of a Cabinet of ministers and governors also appointed by the King. However, in 2010, significant political reform occurred in Tonga. The effect of the reform is to reduce the King's powers, which will devolve to the Cabinet which in turn is answerable to a 30-member Legislative Assembly, 17 of which will be directly elected by the population.

Forest legislation

The Forest Act 1961 allows the government to regulate forest use and to establish forest reserves. It grants a broad discretion to the Minister to make regulations to deal with forest use and protection (s 4). Only one regulation has been made under the Act, which prohibits the export of timber from Samoa without approval from the Director of Agriculture, Forests and Fisheries (The Forest Produce Regulations). A new Forest Policy was approved by Cabinet in late 2009, and the Forests Act 1961 is scheduled for review. The Ministry for Agriculture & Food, Forestry and Fisheries is responsible for forestry in Tonga.

Land tenure

The King is the owner of all land in Tonga and so all land is classified as public land. *The Land Act 1988* defines the forms of access to land, land registration and land use. Key elements in this legislation are the traditional land tenure system and the fundamental right of each male Tongan to have access to land. Each male over 16 years of age is entitled to an allotment of urban land (1,170 m²), and rural land of

³⁹ See summary on Tonga from Third Pacific Heads of Forestry Meeting, 21-24 September 2009, Nadi, Fiji Islands.

(3.3 ha) (Land Act, s 7). The King and the Royal Family retain ownership of the King's Estate and the Royal Family Estate which are not available for subdivision or lease. Nobles also own estates which can be subdivided, allocated and leased. In 2002, a Natural Resources Planning Bill was drafted and approved by Cabinet and Privy Council, but was never passed.

International legal obligations

Tonga is a party to the Rio Conventions and the convention on the Elimination of All Forms of Racial Discrimination, but it is not a party to the Convention on the Elimination of Discrimination Against Women or the United Nations Convention against Corruption. Tonga was the last PIC to ratify the Kyoto Protocol, in 2008.

Activities of development partners relevant to REDD+ readiness

Components of REDD+ Readiness	Past and Current Activities
Component 1: <i>Management of the REDD+ readiness process</i>	Tonga has some experience with a joint management process through its Cabinet Committee on Climate Change (CCCC), which provides policy direction on appropriate adaptation and mitigation measures to government.
Component 2: <i>Stakeholder engagement</i>	GIZ is currently supporting some activities in Tonga relevant to REDD+, through its regional climate change adaptation project, 'Coping with Climate Change in the Pacific Island Region' implemented through SPC. Activities currently include community consultation processes on Eua Island.
Component 3: <i>Implementation framework</i>	No relevant experience to date.
Component 4: <i>REDD+ strategy setting</i>	The GIZ project has involved discussion of land use-based climate change adaptation and mitigation strategies.
Component 5: <i>Reference scenario</i>	There is no national forest resource inventory at present. But the GIZ project includes forest inventory training, as part of a strategy to develop forest management plans using GPS, although these activities are limited to the island of Eua.
Component 6: <i>National monitoring system</i>	Not yet addressed.

GIZ: Coping with Climate Change in the Pacific Island Region

The Government of the Federal Republic of Germany through the Federal Ministry for Economic Cooperation and Development (BMZ) is supporting Tonga to integrate climate change into its strategies and policies on agriculture, forestry and land use under the "Coping with Climate Change in the Pacific Island Region" (CCCPPIR) project.⁴⁰ This project supports the REDD+ readiness process in Fiji, but REDD+ is not part of the project in Tonga.

⁴⁰ Before January 2011, this project was called "Adaptation to Climate Change in the Pacific Island Region" (ACCPPIR).

Annex D: Status of Ratification of International Instruments

	Fiji	Kiribati	Marshall Islands	Palau	Samoa	Solomon Islands	Tonga
UNFCCC	Yes	Yes	Yes	Yes	Yes, submitted initial and 2 nd national communication	Yes	Yes
Kyoto Protocol	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Copenhagen Accord	Yes	Yes	Yes ⁴¹	Yes	Yes	No	Yes
UNDRIP⁴²	Absent ⁴³	Absent	Absent	Absent	Abstained	Absent	Absent
ILO 169⁴⁴	Yes ⁴⁵	No	No	No	No	No	No
Convention on Biological Diversity	Yes (1993)	Yes (1994)	Yes (1992)	Yes, National Biodiversity Strategy Action Plan (1999)	Yes (1994)	Yes (1995)	Yes (1998)
Convention on the Elimination of All Forms of Racial Discrimination (1969)	Yes (1973)	No	No	No	No	Yes (1982)	Yes (1972)
Convention on the Elimination of Discrimination against Women (1979)	Yes (1995)	Yes (2004)	Yes (2006)	No	Yes (1992)	Yes (2002)	No
United Nations Convention Against Corruption (2003)	Yes (2008)	No	No, but is preparing for ratification ⁴⁶	Yes (2009)	No	No	No
NAPAs⁴⁷ (as of 31 Jan 2011)	No	Yes (Jan 2007)	No	No	Yes (Dec 2005)	Yes (Dec 2008)	No

⁴¹ See accompanying Note Verbale at: http://unfccc.int/files/meetings/application/pdf/marshallislandscphaccord_app2.pdf

⁴² UNDRIP can be found at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N06/512/07/PDF/N0651207.pdf?OpenElement>

⁴³ Absent in the General Assembly on 13 September 2007 on the day the vote took place as to whether to adopt UNDRIP by resolution.

⁴⁴ ILO 169 can be found at: <http://www.ilo.org/ilolex/cgi-lex/convde.pl?C169>

⁴⁵ Fiji ratified ILO 169 in 1998.

⁴⁶ See UNDP Press Release on call for ratification of UNCAC in Marshall Islands at <http://www.undppc.org.fj/pages.cfm/newsroom/press-releases/2011/nitijela-speaker-calls-ratification-un-convention-against-corruption-by-marshall-islands.html>

⁴⁷ http://unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585txt.php

Annex E: Potential Areas for Collaboration Between UN-REDD and SPC/GIZ on Regional REDD+ Readiness

In 2009, the UN-REDD Programme and the World Bank's Forest Carbon Partnership Facility developed an agreed framework for REDD+ readiness, intended to harmonize their respective programs.⁴⁸ The framework specifies six components which are intended to guide the REDD+ readiness process. These components also constitute a broad guideline for compliance with the UNFCCC's Decision on REDD+ which forms part of the Cancun Agreements.⁴⁹

The analysis of the SPC/GIZ project below is based on the project proposal submitted by GIZ to the Federal Ministry for the Environment (BMU) for 'Climate protection through forest conservation in the Pacific Island Countries' (2010) as well as the SPC/GIZ Inception Workshop and Regional REDD+ Strategy Framework Development Report (February 2011). This project, which includes support for the development of a regional REDD+ Roadmap, is still in its initial design phase, and the Inception Workshop was the first step towards developing a much more detailed programme for a regional REDD+ Roadmap for the Pacific. UN-REDD seeks to work collaboratively with SPC/GIZ to build on the work that has already been done, working within the UN-REDD / FCPF framework which establishes the six components of REDD+ readiness. This analysis is presented in order to identify opportunities for collaboration at the regional level.

	<i>REDD+ Readiness components and typical activities</i>	<i>Opportunities for collaboration and observations on SPC/GIZ regional REDD+ process</i>
1	Management of the REDD+ Readiness process	
	Establishment of a multi-stakeholder information network	UN-REDD could assist this process through the Regional REDD+ Information Platform, as a joint effort with the SPC/GIZ project. It will be important to ensure that there is a mechanism to provide ongoing information to stakeholders throughout the process.
	Establishment of a coordination mechanism, e.g. REDD+ Steering Committee	There is a proposal under the SPC/GIZ programme to establish a Regional REDD+ Committee to manage the process for developing a regional Roadmap, which will be coordinated by the Heads of Forestry (HOAFS/HOFS). It will be important to ensure that this process also has cross-sectoral engagement and input from CSOs/NGOs.

⁴⁸ See "Harmonization of Readiness Components", UN-REDD Programme, Note by the Secretariat, October 2009, UN-REDD/PB3/7.

⁴⁹ See Decision 1/CP. 16, available at: [http://unfccc.int/documentation/decisions/items/3597.php?such=j&volltext="cancun agreements"#beg](http://unfccc.int/documentation/decisions/items/3597.php?such=j&volltext=)

	<i>REDD+ Readiness components and typical activities</i>	<i>Opportunities for collaboration and observations on SPC/GIZ regional REDD+ process</i>
	Preparation of a REDD+ readiness roadmap	In late 2010, the SPC/GIZ project initiated the process of developing a Regional REDD+ Roadmap.
	Analysis of sectoral approaches to REDD+ (e.g., timber industry; agricultural sector)	The development of the Regional REDD+ Roadmap is being run through HOFS/HOAFS. The process would benefit from a targeted and thorough engagement with the energy, land-use planning, environment and finance sectors, as has already been envisaged in the Inception Report.
2	Stakeholder Engagement	
	Awareness raising – government agencies	The Inception Report identifies the need for integration and alignment of regional REDD+ activities with regional policies and agreements from other sectors (p 56, and p. 65). At present, the only sectors engaged are forestry and agriculture through HOAFS. The process could be improved by developing a strategy to involve other sectors (environment, energy, lands/planning and finance) in the development of the Regional REDD+ Roadmap.
	Awareness raising – communities	The Inception Report notes the need for engagement with civil society with regard to multi-stakeholder consultation processes. UN-REDD could assist in identifying a strategy for the engagement of Indigenous Peoples and other forest-dependent communities.
	Awareness raising – other (industry, armed forces, etc.)	UN-REDD could assist in establishing a REDD+ awareness-raising programme to reach out to other non-forest sectors.
	Mechanism for broad-based participation in place (government, forest communities, indigenous peoples, NGOs and industry)	In accordance with SPC/GIZ's initial project document, at present the proposed Regional REDD+ Steering Committee only extends to the four Melanesian PICs. UN-REDD can help to extend support to enable mid-size countries and island atoll countries in the Pacific to participate in the process. Attention should also be given to providing a mechanism for customary landowners and other CSOs/NGOs to engage in the process of developing a regional REDD+ Roadmap.
	Preparation/application of FPIC procedures	UN-REDD has expertise in this area and is well-placed to assist in the development of these procedures. ⁵⁰

⁵⁰ See [The draft UN-REDD Programme and FCPF joint Guidelines on Stakeholder Engagement in REDD+ Readiness With a Focus on the Participation of Indigenous Peoples and Other Forest-Dependent Communities](#) available on the UN-REDD website. UN-REDD is also in the process of developing a set of Guidelines for the application of FPIC in the context of REDD+ country programmes.

	<i>REDD+ Readiness components and typical activities</i>	<i>Opportunities for collaboration and observations on SPC/GIZ regional REDD+ process</i>
3	Implementation Framework	
	Mainstreaming REDD+ into planning (land use and socio-economic development)	Forest and agriculture sectors are engaged through HOAFS/HOFS. The process requires broader cross-sectoral engagement, which UN-REDD can help to facilitate.
	Design of benefit distribution system (including establishment of REDD+ Fund)	The SPC/GIZ programme already has a proposal to define a common set of principles for benefit distribution (see Inception Report, p 55). UN-REDD has expertise in the area of developing benefit-sharing mechanisms and is well-placed to assist with the discussion of potential options.
	Strengthening forest governance - community or social forestry development	This must be implemented alongside the regional roadmap development process. UN-REDD is well-placed to provide advice and support on this topic based on the experience from UN-REDD country programmes around the world.
	Strengthening forest governance - law enforcement and reduction of corruption	The Inception Report identifies the need to define a common set of common principles for integrity in REDD+ governance at a regional and domestic scale (p 56, and p 65). It also contains a proposal to establish a regional Designated Operational Entity for audit purposes, to support the Designated National Authorities (p. 60). Preliminary discussions have taken place on the need to “strengthen integrity” in the forest sector. UN-REDD can contribute to discussions on the potential for a regional approach to anti-corruption mechanisms.
	Application of social and environmental safeguards	The Inception Report identifies the need to define a common set of principles relating to social safeguards and environmental safeguards (leakage, reversals) (p. 56, p. 65-66). UN-REDD has particular expertise in this area and is well-placed to assist in the development of a regional approach to safeguards.
4	REDD+ Strategy Setting	
	Analysis of drivers of deforestation and degradation	The inception report specifically addresses the need to analyse these drivers (pp. 64 – 65) and notes the main drivers as agricultural expansion, infrastructure, mining, forestry, subsistence land use, mangrove use and oil palm.
	Analysis of opportunities to enhance forest carbon stocks (reforestation, rehabilitation, etc.)	Future discussions could focus on this area, which is of particular relevance to mid-sized countries and small island atolls. Support for exchange of information in the context of PICS could be provided through the Regional REDD+ Information Platform, including UN-REDD contributions.
	Identification of REDD+ intervention options	The SPC/GIZ Inception Report contains a proposal to promote REDD+ through Sustainable Forest

	<i>REDD+ Readiness components and typical activities</i>	<i>Opportunities for collaboration and observations on SPC/GIZ regional REDD+ process</i>
		Management (p. 58) and further options should be explored. This is clearly an area where PICs will benefit from exchange of experiences as REDD+ activities develop at the national level. UN-REDD can add value to this process through experiences from other country programmes.
	Preparation of National REDD+ Strategy, including consultation processes	The Inception Report contains a detailed list of issues for a Regional REDD+ Framework (pp. 54–55, Table 9, pp. 64–66).
5	Reference Scenario	
	Analysis of past trends in forest cover and forest quality	The Inception Report contains a proposal to align the development process of Reference Emission Levels and Reference Levels (REL/RLs) in the region (p. 55, and 59) with this process to be managed by SPC/SOPAC.
	Estimation of biomass equations (allometric equations)	Addressed as above.
	Scenario setting for future trends in forest development	UN-REDD could assist in facilitating future discussion at the regional level.
	Estimation of interim reference scenarios	UN-REDD could assist in facilitating future discussion at the regional level.
6	National Monitoring System	
	Strengthening the national forest inventory process	The Inception Report identifies the need for capacity transfer and training for carbon monitoring as a key theme for regional cooperation (p. 59).
	Establishment/capacity building for remote sensing	Highly suitable for further discussion and exploration with development partners, regarding a regional approach to capacity building.
	Development of participatory monitoring techniques	UN-REDD could assist in facilitating future discussion at the regional level.
	Data management/capacity building for reporting (link to National Communications)	UN-REDD could assist in facilitating future discussion at the regional level.
	Development of process for MRV of social safeguards.	The Inception Report identifies the need to establish a regional approach to safeguards (p 65–66). Further discussion could take place regarding the potential for a regional system for monitoring, reporting and verifying compliance with environmental and social safeguards, including the potential for a regional recourse/complaints mechanism. UN-REDD has the necessary expertise to facilitate these discussions.

Annex F: Regional Context

Overview of the Pacific

The Pacific Region is divided into three sub-regions based on ethnic, cultural and linguistic differences (see Figure 1). Melanesia consists of four relatively large states in the south-western Pacific: Fiji, Papua New Guinea, Solomon Islands and Vanuatu. Polynesia lies to the south-east, covering the five states of Cook Islands, Niue, Samoa, Tonga and Tuvalu. Micronesia lies to the north-west, comprising the Federated States of Micronesia, Kiribati, Marshall Islands, Nauru and Palau.

Environment

The Pacific Region consists of 7,500 islands which cover a total land area of about 550, 000 km². Fewer than 550 of these islands are inhabited. Eleven of the PICTs are less than 500km² in size and consist of archipelagos of low-lying atolls. Figure 1 shows that, though land area may be small, many PICTs include extensive ocean territories. For example, Kiribati covers 3.5million km² of ocean, more than 500 times larger than its total land area (USP, 2005).

PICTs exhibit the environmental profile common to all small island ecosystems. Among the most important of these characteristics are the following:

- A high degree of endemism, but relatively small number of species
- A high degree of economic and cultural dependence on the natural environment
- Sensitivity of ecosystem to changes in climate
- Vulnerability to a wide range of natural disasters
- Low resistance of native species to introduced pathogens and predators
- High vulnerability to exotic species with invasive tendencies

The intact forests of the Pacific islands are home to many unique species and communities of plants and animals which have evolved independently of other land masses. On some islands, 80% or more of the species are endemic,⁵¹ with some species limited to highly specific niches on a single island⁵². The Pacific Island Countries have more rare, endangered and threatened species per capita than anywhere else in the world. In addition, this region is the centre of genetic diversity for many crop and fruit-tree species.

Many PICs have very limited freshwater resources. Some islands, including several in Kiribati, Tuvalu and the Cook Islands, rely almost entirely on a single source of groundwater or surface reservoirs. The quantity of surface water is highly variable, depending on rainfall, and is often of poor quality, harbouring pathogens and insect vectors of infectious diseases. Although groundwater is usually safe, accessing it is often difficult. In Niue, the majority of

⁵¹ New Caledonia: 80% of the island's 3,700 plant species are found nowhere else (Conservation International website www.conservation.org; accessed 30/05/11)

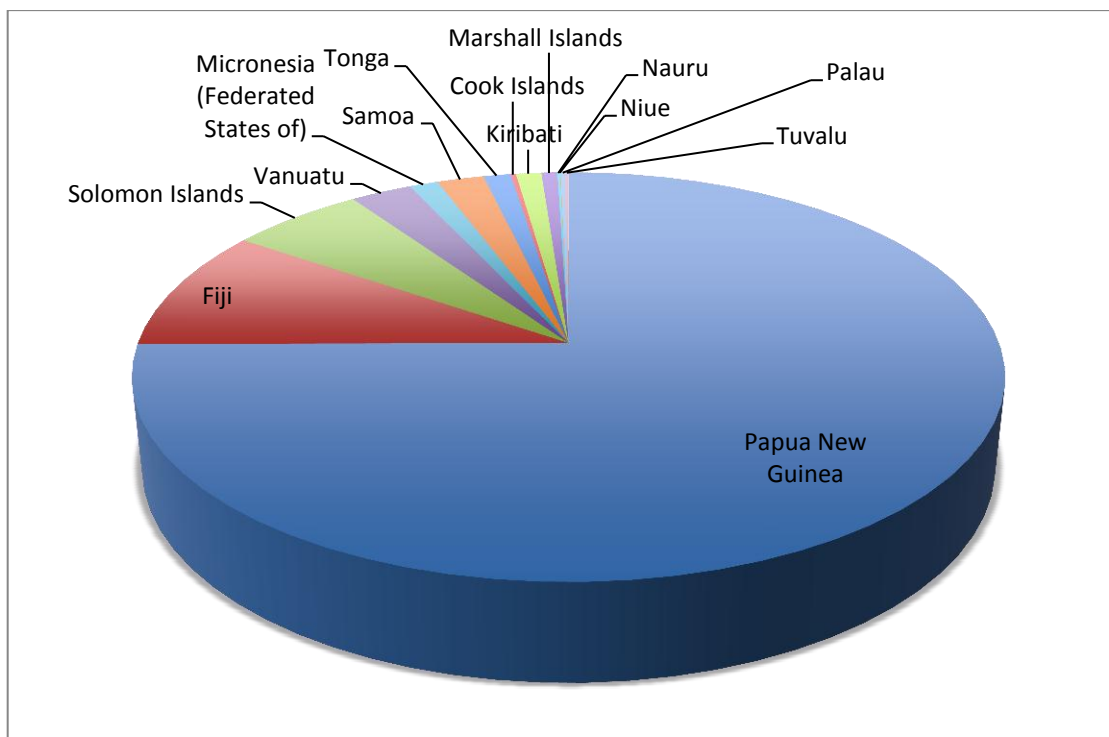
⁵² For example, the lowland evergreen tree *Manilkara samoensis*, is found only in the native forest remnants on the Falealupo peninsula on the western end of Savaii island, Samoa (Pouli *et al*, 2002)

GHG emissions are from diesel generators, used by every household to pump groundwater to the surface.

Demography

Although occupying less than 5% of the land area of the region known as Oceania (including Australia and New Zealand), citizens of Pacific countries and territories constitute over 25% of the total population. The population of the PICs reached 8.8 million in 2008. By far the majority (93%) live in the four Melanesian countries. PNG alone accounts for 75% of the total PIC population (see Figure 6). As Table 8 indicates, the Melanesian countries, and PNG in particular, also dominate the region in terms of land area. PNG's territory comprises 87% of the total land area of the PICs. Barely 1% of the combined land area of the fourteen countries lies outside Melanesia.

Figure 6: Population in Pacific Island Countries in 2008, (GFRA 2010, FAO)



The high proportion of both land and population in the Melanesian countries, compared to the other PICs, means that investors and funding agencies will inevitably gravitate towards these countries in order to reach the maximum number of potential beneficiaries and to take advantage of the economies of scale that larger projects can deliver.

The people of Melanesia are more widely dispersed compared to their Polynesian and Micronesian counterparts. The 7% of PIC citizens living in small and mid-sized countries are balanced on 1% of the land resources. Consequently, the benefits of mechanisms linked to the land, such as REDD+, will be shared among relatively more individuals, meaning lower shares and reduced interest.

In the larger countries, a relatively high proportion of the population lives in rural areas. However, in contrast to their Melanesian neighbours, the majority of Fijians are urban dwellers. The mid-sized countries of FSM, Samoa and Tonga are heavily rural, where three quarters of households make their living off the land. Most of the smaller countries are now largely urbanised. This implies that only a minority of their small populations possess a direct link to the land, and hence the management skills that will allow them to contribute to REDD+ programmes, and potentially be compensated or rewarded for their contributions.

Many of these smaller countries, particularly Nauru and Niue, have seen dramatic falls in their populations over the past decade. A number of factors have driven people to emigrate in large numbers, including natural disasters, land shortages, depletion of natural resources and the lack of employment or education opportunities. These countries have tended not to report these declines in numbers to the FAO and other UN agencies, perhaps anticipating a consequent drop in grant aid linked to population. However, the current steady growth in the populations of the Melanesian countries (again, with the exception of Fiji) will further emphasise the disparity in size between them and their Pacific neighbours.

Table 8: Demographic and economic indicators in Pacific Island Countries, 2008 (FAO, 2010)

PICs	Land Area (km ²)	Population in 2008				Gross Domestic Product in 2008	
		Total ('000s)	Density (per km ²)	Annual Growth Rate (%) 1998-2008	Rural population (% of total)	Per capita (USD)	Annual Growth Rate (%)
PNG	452,860	6577	15	2.4	88	2,180	6.6
Fiji	18,270	844	46	0.6	48	4,358	0.2
Solomon Islands	27,990	511	18	2.6	82	2,613	6.9
Vanuatu	12,200	234	19	2.6	75	3,935	6.6
FSM	700	110	157	-	78	3,091	-2.9
Samoa	2,830	179	63	-	77	4,555	-3.4
Tonga	720	104	144	1.0	75	3,837	0.8
Cook Islands	240	20	83	-	25	9,100	2.9
Kiribati	810	97	120	2.1	56	2,426	3.0
Marshall Islands	180	61	339	3.4	30	2,500	1.5
Nauru	20	10	500	-	0	5,000	-12.1
Niue	260	2	8	-	50	5,800	-
Palau	460	20	43	-	20	8,100	-1.0
Tuvalu	30	10	333	-	50	1,600	2.0
TOTAL	517,570	8,779					

Economy

The ADB Pacific Economic Monitor released in February 2011 predicts that the Pacific Island Economies will grow by only 1.7% in 2011 and will remain close to these levels in 2012 as well. Inflation of 4.0% is expected across the Pacific Island economies in 2011 but there is expected to be a rise in tourism. This is particularly welcome news for Fiji, Kiribati, Samoa and Tonga, where tourism provides a substantial proportion of national revenue and foreign investment. The recommencement of gold production in the Solomon Islands is expected to contribute to an annual growth rate of 7.5% in 2011.

Economic data within the region shows similar patterns to those of population (Table 8), as PNG and the rest of Melanesia continue to skew the regional picture. By taking out the data for PNG, the per capita GDP for PICs rises from USD\$2,578 to USD\$3,767. It is estimated that PIC economies will need to grow at about 7 to 8% per annum to create sufficient employment and maintain livelihoods. However, few of the small island economies can look forward to sustained high levels of economic growth. Largely for the same reasons as the recent exodus of residents, the economies of FSM, Samoa and particularly Nauru, are shrinking. Meanwhile, PNG's economy, and those of its Melanesian neighbours, are expanding at a much faster rate than others in the region. We can therefore expect income levels in the larger countries to catch up steadily with those in Polynesia and Micronesia.

Annex G: Regional Organisations in the Pacific

The success of regional-level efforts to coordinate policy and strategy in any field depends on the strong support and participation from a wide range of stakeholders, including representatives of regional bodies with a strong mandate to act in the joint interest of countries within the region.

Because of the political differences described above, the existence of strong regional institutions is particularly important for coordination on REDD+ issues. Fortunately, the PICs are already served by a range of well-established regional bodies and organisations, and every effort should be made to work with these existing organisations to avoid duplication of effort and to build regional capacity for REDD+. Some of these organisations are already actively involved in REDD+ discussions and initiatives. Those most directly relevant in this context are described below.

Intergovernmental and academic organizations

*Pacific Islands Forum (PIF)*⁵³

The PIF was established in 1971 as the key body for regional political discussion and coordination in the Pacific. The PIF Secretariat (PIFS), based in Suva, Fiji, holds an annual meeting of the 16 regional Heads of Government; the PICs themselves plus Australia and New Zealand. The chair of the PIF rotates on an annual basis, along with the responsibility to host the meeting. The PIFS is funded partly by member governments and is also favoured by many donors as the implementing agency for regional-level initiatives, particularly in sectors which require a strong, unified Pacific voice at international policy discussions.

Council of Regional Organisations in the Pacific (CROP)

The Pacific Islands Forum established the CROP in 1988 to improve coordination among intergovernmental agencies working in the Pacific for sustainable development. It brings together 11 regional inter-governmental agencies, some of which are also described below. The PIFS acts as CROP's permanent chair and provides secretarial support. CROP is not a legally constituted body but provides policy advice to the governments of the region across a range of sectors and may also assist in policy formulation at national and regional levels.

Secretariat of the Pacific Community (SPC)

Founded in 1947, SPC was originally known as the South Pacific Commission. In 1997 it became the Secretariat of the Pacific Community to reflect a broader membership. SPC is a CROP agency with headquarters in Noumea, New Caledonia. SPC provides technical and policy advice to PICTs and conducts training and research. The SPC has the widest portfolio of activities of the CROP agencies, covering many sectors, including forest policy as part of its Land Resources Division (LRD), as well as geoscience through its Applied Geoscience and Technology Division (SOPAC). SPC also has a Social Resources Division (SRD) which includes its Human Development Programme. The SRD coordinates culture, gender and youth issues in the Pacific region and operates SPC's Community Education Training Centre. SPC is the

⁵³ Fiji has been suspended from PIF meetings and events since 2 May 2009.

regional organisation that has taken the lead in the development and implementation of regional approaches to REDD+.

Pacific Islands Applied Geoscience Commission (SOPAC)

On 1 January 2011, SOPAC became a fully integrated division of SPC with the specific objective of strengthening the combined capacity of SOPAC and SPC to respond to PIC climate change needs. SOPAC is the best-placed organisation to conduct regional-level resource mapping and modelling in the Pacific and thus will be crucial for any regional REDD+ strategy. SOPAC has been conducting vegetation mapping of many small PICs and has already mapped some of the smaller countries at a scale of 1:10,000. One of SOPAC's forthcoming projects is to map pandanus and breadfruit trees for climate change adaptation purposes, as these are major contributors to food security in the Pacific.

Pacific Heads of Agricultural and Forestry Services (HOAFS and HOFS)

Discussions regarding the proposal to develop a regional REDD+ Roadmap are now taking place under the regional Pacific Heads of Agriculture and Forestry Services meetings (HOAFS), facilitated by SPC. HOAFS meetings are held every two years in the Pacific, with Pacific Heads of Forestry Services (HOFS) meetings held as informal technical consultation meetings on years between HOAFS. The HOAFS forum includes CEOs, Directors and Permanent Secretaries of Ministries of Agriculture and Forestry of the 22 Pacific Island member States and Territories of SPC. It is the main regional platform for discussing national and regional policy across the two sectors of agriculture and forestry. The Land Resources Division of SPC, based in Suva, Fiji, provides the secretariat for HOAFS. The schedule for HOAFS and HOFS meetings is set out in Table 9.

Table 9: Schedule of HOFS/HOAFS meetings 2008-14

	Location	Date	Comment
3rd HOAFS meeting	Apia, Samoa	September 2008	
3rd HOFS	Fiji	September 2009	Recommended that a regional REDD+ programme be established
4th HOAFS meeting	Nadi, Fiji	14–17 September 2010	
4th HOFS	Nadi, Fiji	September 2011	Will consider framework for a draft regional REDD+ roadmap
5th HOAFS meeting		September 2012	
5th HOFS		September 2013	
6th HOAFS meeting		September 2014	Target: a regional REDD+ roadmap to be adopted at this meeting.

Secretariat of the Pacific Regional Environment Programme (SPREP)

SPREP is a CROP agency that was first established as an intergovernmental organisation in 1993. Its headquarters are in Apia, Samoa. SPREP promotes co-operation on environmental matters in the South Pacific region and provides assistance to PICTs to ensure environmentally sustainable development for present and future generations. As PIFS and the CROP consider climate change as an environmental issue, it has fallen to SPREP to coordinate regional policy, strategy and support. To this end, SPREP convenes regional discussions under the Pacific Climate Change Roundtable (PCCR) in order for PICs to monitor progress of the objectives set out under the Pacific Island Framework for Action on Climate Change (PIFACC). The PIFACC is the current guiding document for regional climate change policy in the Pacific region. A review of the document is currently underway, informed by the latest PCCR in Niue in March 2011. In a similar arrangement to the HOFs/HOAFS meetings mentioned under SPC above, SPREP coordinates regular regional meetings of Heads of Environment.

University of the South Pacific (USP)

USP is the major regional academic institution in the Pacific and is also a CROP agency. The University provides internationally recognised higher education and training at all levels for the Pacific region. USP has set up a climate change centre and, with the support of AusAID, has hired five research fellows to serve the centre alongside fifteen Australian postgraduate students. USP is also compiling regional case studies on projects by SOPAC/IUCN for a report to the Australian Government. In March 2011, the EU announced that it has provided €8 million to USP for climate change education, which is mainly earmarked for upgrading infrastructure and services within the climate change centre.

Regional civil society organisations (CSOs)

There are few CSOs in the Pacific that can justifiably claim to operate at a regional level, in large part due to the logistical costs involved in maintaining effective networks in such a far-flung region. Consequently, non-government participation in regional policy discussions is often limited to CROPs and international NGOs. This lack of CSO representation was recognised by PIC leaders in 2004, when they mandated the PIFS to accredit regional CSOs as Pacific Regional NGOs (PRNGOs) in order to allow them to formally participate in regional policy consultations.

PIFS developed the criteria for accreditation in 2007 including, for example, that organisations should be active in at least 5 countries to qualify for PRNGO status. However, this status only entitles organisations to a consultative role, at the discretion of PIF member states, and does not include access to funds to build capacity or cover costs of attendance at regional meetings. Furthermore, it is not clear from the perspective of the PIFS whether accreditation obliges a PRNGO to uphold decisions of regional policy discussions to which it has been a party, or entitles it to effective and equal participation in these discussions.

Few organisations have been motivated to apply for PRNGO status. As of March 2011, only one organisation had been accredited as a PRNGO; the Pacific Islands Association of NGOs

(PIANGO), a network formed in 1991. PIFS recognises PIANGO as an umbrella body for all CSOs in the region and has effectively delegated the PRNGO accreditation process to PIANGO, a move which was received unfavourably by other regional CSOs. NZAID provided financial support to PIANGO to participate in regional policy discussions until 2009, when this funding was terminated due to allegations of financial irregularities. Since 2009 there have been no accredited NGOs at official PIF or CROP meetings. However, SPREP invited some regional CSOs to the PCCR in March 2011, a move many saw as ground-breaking.

In order to ensure that regional REDD+ discussions are fully representative, systems such as the PRNGO accreditation process must be fully operational, transparent, accepted by CSOs themselves, and accompanied by financial support to ensure that PRNGOs can fulfil their roles. The following regional bodies are among those which have a potential role in regional REDD+ strategy development.

Foundation for the Peoples of the South Pacific International (FSPI)

Based in Suva, Fiji. FSPI serves as a Secretariat for several community-based organisations working for sustainable development in the Pacific. Network partners exist in Fiji, Kiribati, Palau, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu and Timor Leste. The PNG and Samoa partner organisations (FPCD and Ole Siosiomaga respectively) are actively involved in community forestry and have already made efforts to bring local communities' perspectives on forests to national and international REDD+ discussions.

Pacific Conference of Churches (PCC)

PCC is the Regional Ecumenical Organisation representing churches at all levels in the Pacific region. PCC's members include 28 Pacific churches, and 8 National Councils of Churches. The PCC can lay claim to the title of most representative CSO in the Pacific region. A total of 6.5 million people (75% of the total population of the PICs) belong to one of its 28 member churches. PCC provides community services through six thematic programmes, one of which is the Climate Change & Resettlement Programme.

Through this programme, PCC runs community awareness workshops on the link between climate change and poverty, wealth and ecology. It also participates in regional fora such as the PCCR as well as international climate negotiations (PCC was an advisor to the Fiji Government at COP 15 in Copenhagen). Local churches in the Pacific frequently act as customary landholder cooperatives, facilitating community-level decision-making and providing management advice. In this respect, PCC is potentially a crucial stakeholder for regional and national REDD+ strategies, linking planning to community practice in the forest and land use sector.

Pacific Gender Climate Coalition (Gender CC)

Gender CC, based in Rarotonga, Cook Islands, promotes gender-sensitive analysis of the impacts of climate change. The Coalition was represented at the PCCR in Niue in March 2011 and has strong links to international gender and climate change networks.

International environmental NGOs (ENGOS)

The following international ENGOS are active in the Pacific region. They have either initiated activities related to REDD+ in PICs or have expressed interest in doing so.

Conservation International (CI)

CI's Pacific Islands Programme operates out of an office in Apia, Samoa. CI has significant regional expertise in the Pacific concerning the conservation of mangroves and the control of invasive species. They are interested in exploring the possibility of mangrove restoration as a climate change adaptation strategy. 'Bio-shields' of mangroves are being promoted for coastal zone protection as an alternative to sea walls, with 'Blue Carbon' as one source of finance for their establishment. CI is a prominent member of the Blue Carbon Working Group, which explores the climate change mitigation potential of coastal and marine-based carbon pools. REDD+ and Blue Carbon strategies may overlap in mangrove ecosystems.

CI has two forest carbon projects in Fiji; an afforestation scheme and a voluntary REDD project to be funded largely through the private sector (Fiji Water). Other CI activities which may be a source of lessons for a regional REDD+ strategy include the development of a nationwide conservation strategy for Samoa, and the Critical Ecosystems Partnership Fund (CEPF), which is used to map sites in Key Biodiversity Areas (KBA). CI has initiated the concept of KBA+, in which the 'plus' elements include the interaction of biodiversity conservation with climate change and local livelihoods.

International Union for the Conservation of Nature (IUCN)

IUCN operates a regional programme for Oceania out of its office in Suva, Fiji. It is a membership organisation (including all the other ENGOS listed below) and sees its role as a facilitator between member ENGOS and government institutions, particularly in situations where trust has broken down.

IUCN has extensive experience in the development of PES systems, of which REDD+ is a variation. In the Pacific, this experience includes the development of national-level benefit-sharing mechanisms for large natural resource extraction projects (e.g. oil, gas, timber). It also has expertise in mangrove conservation and carbon sequestration through its Pacific Mangrove Initiative (PMI). The PMI includes the EU-funded MESCAL project (Mangrove Ecosystems for Climate change Adaptation and Livelihoods), currently covering Fiji, PNG, Samoa, Solomon Islands, Tonga and Vanuatu.

IUCN envisages REDD+ as a potential source of finance for activities under MESCAL in the Pacific but stresses the need for REDD+ to be seen as part of a 'portfolio approach' to forest sector financing. Such an approach emphasises the value of several complementary policy tools and sources of funds, through which REDD+ could be integrated with other PES approaches. Under its Water and Nature Initiative, IUCN is currently investigating mangrove-based PES systems in Samoa.

Live and Learn Environmental Education (LLEE)

LLEE is an Australia-based ENGO formed in 1992 by volunteer teachers. It specialises in community participatory education to promote sustainable livelihood development and

conservation. LLEE has a Pacific regional office in Suva, Fiji and has country offices in the Solomon Islands, Fiji, Vanuatu and PNG. In late 2010, LLEE received a grant of €2.1 million from the EU for a 5-year project to research, design and implement REDD+ pilot projects in Fiji and Vanuatu. These projects were launched in March 2011.

In February 2011, LLEE also received a joint grant from the Asian Development Bank and the Australian Government for REDD+ activities in the Solomon Islands, with equitable benefits for local communities as the key objective. The project grant is for AUD\$180,000 over 18 months and will be used on a REDD+ pilot project in Choiseul, Western Province, focused on governance reform. This project aims to research and design, but not implement, a REDD pilot activity for the Solomon Islands with a focus on community engagement and education.

The Nature Conservancy (TNC)

TNC was the first ENGO to develop a project based on the concepts now understood as REDD+ (the Noel Kempff project in Bolivia). TNC's activities in the Pacific have recently focused on the Coral Triangle (including PNG and the Solomon Islands), particularly in the fields of community forest management and Reduced Impact Logging (RIL) strategies. TNC is also currently working on a protected area network for Palau.

Wildlife Conservation Society (WCS)

Like TNC, WCS has substantial experience with REDD+ projects from other parts of the world, particularly Cambodia and Madagascar. WCS operates a South Pacific Programme out of its PNG office and is currently engaged in pilot REDD+ activities in PNG, and in Blue Carbon work through a marine protected area project in Fiji.

World Wide Fund for Nature (WWF)

WWF's South Pacific Programme includes projects to promote ecosystem-based management in Fiji. They have moved away from terrestrial projects and now focus on Blue Carbon issues, particularly mangroves. Like the other international ENGOs, they are actively involved in the policy development of REDD+ at the international level.

Annex H: REDD+ Projects and Programmes in the Pacific

SPC/GIZ: Climate Protection Through Forest Conservation in Pacific Island Countries

The third HOFs meeting, held in Fiji in 2009, concentrated on the issue of forests and climate change (SPC, 2009b). The recommendations of the meeting included a call for a regional framework for REDD+ (Recommendation 1(vi)(d)).⁵⁴ In response to this call, the German Federal Environment Ministry (BMU) financed the project '*Climate Protection through Forest Conservation in Pacific Island Countries*', implemented by SPC in partnership with the German Agency for International Cooperation (GIZ). The SPC/GIZ regional project has funding of € 4.9 million over a four-year period from November 2010 to October 2014. Two of the goals of the SPC/GIZ project explicitly target regional outcomes: a 'regional REDD+ roadmap' and a 'regional REDD+ information and support platform'.

The SPC/GIZ project inception workshop in November 2010 brought together forest officials from the four Melanesian countries: Fiji, PNG, Solomon Islands and Vanuatu. The outcomes of this workshop are contained in an Inception Report (SPC/GIZ, 2011). Though inspired by the HOFs 2009 meeting, at which all PICs were present, this regional project focuses on the Melanesian countries which, as indicated above, contain about 98.5% of the total forest area in the PICs (FAO, 2010). Further support is required in order to fully engage the other PICs in regional REDD+ policy discussions and related practical actions.

UN-REDD therefore intends to collaborate closely with SPC/GIZ to support and build on the current and planned work through their project. In addition to exploring opportunities for all PICs to participate in a regional REDD+ approach, UN-REDD also brings the advantages of a dedicated international REDD+ readiness process, with six components identified and defined in collaboration with the World Bank's FCPF (see table 6). Annex E outlines a comparison of the draft regional REDD+ policy developed by SPC/GIZ against the six components of the UN-REDD REDD+ readiness template, to suggest potential entry points for UN-REDD collaboration with the SPC/GIZ project.

SPC/GIZ: REDD+ process in Fiji

There are no other projects in the region, apart from the SPC/GIZ project described above, that directly address REDD+ at the regional level, although a number of significant country-level initiatives are ongoing. As noted above, Fiji's national REDD+ readiness process is supported through the BMZ project, *Coping with Climate Change in the Pacific Island Region* (CCCPIR). This project was also initiated in response to the recommendations of a HOAFS meeting, in 2006. Under CCCPIR, only the Fiji readiness process is specifically related to

⁵⁴ The following donors and partner agencies also attended the 2009 HOFs meeting: EU, FAO, GTZ, JICA, ACIAR, USDAFS, UNFF, CSIRO and SOPAC. The Recommendations of the 2009 HOFs meeting are contained in Annex 1 of the Submission by SPC on Regional and Sub-regional Inputs to UNFF9. As of May 2001, the Recommendations have not yet been formally endorsed by all of the governments attending 2009 HOFs.

REDD+, but the project also supports the integration of climate change into the national forestry and land use strategy in Tonga as well as climate change education programs, including the role of forests, in Fiji, Kiribati, Samoa, Tonga and Vanuatu.

Government of Japan/JICA

The Government of Japan has also demonstrated a commitment to advancing REDD+ in the Pacific region in addition to the current Tier 2 UN-REDD project of which this report is a part. The Japanese Ministry of Foreign Affairs (MOFA) has provided support to the government of Samoa, through a special fund administered by the Japan International Cooperation System (JICS), for the 'MRV System Installation project'. This project will run from June 2011 until March 2013 with the overall goal that the government of Samoa succeeds in reducing emissions through implementation of REDD+. The Japan International Cooperation Agency (JICA) will provide technical support under this project at the request of the Government of Samoa. However, with the project focusing on MRV, the goal of successful REDD+ implementation will not be achieved without links to a more comprehensive national REDD+ readiness process. JICA has also earmarked a substantial sum (USD \$8-10 million) to collaborate with UN-REDD in the development of MRV systems for REDD+ in PNG.

UN-REDD/FCPF National REDD+ Readiness

The two UN-REDD country programmes, in PNG and Solomon Islands, both include elements of regional experience sharing. Both programmes are due to begin implementation of REDD+ readiness in 2011 according to the six components of readiness described in table 8. The Solomon Islands program will initially concentrate largely on capacity building and awareness raising activities on REDD+, including at the grassroots level. The PNG program proposes, however, to allocate the majority of resources to development and piloting of MRV systems and technology. Under the FCPF, the government of Vanuatu has applied for the release of funding support to develop their comprehensive Readiness Preparation Plan (R-PP). UN-REDD and FCPF have co-operated closely since 2008 at both international and national levels, in order to avoid redundancy and achieve optimum efficiency of program implementation. Once the Vanuatu national readiness process is initiated, it will therefore be guided by the same six-step readiness process as the UN-REDD country programmes in PNG and Solomon Islands.

European Union

The European Union (EU) has initiated a Global Climate Change Alliance (GCCA) to improve dialogue between the EU and developing countries. Under the GCCA, the EU and PIFS signed the *EU-Pacific Joint Initiative on Climate Change* in 2010, which includes support for REDD+ pilot projects in Fiji and Vanuatu (implemented by LLEE, as described above), as well as direct budget support to the governments of Samoa (€2.5 million) and Solomon Islands (€2.8

million). Under the Joint Initiative, the EU is also committed to providing training and research assistance on climate change through the USP (€8 million), and regional meetings to prepare Pacific delegates for climate change negotiations. These regional capacity building initiatives may include REDD+ elements.

The EU's priorities for the coming years, for climate change in the Pacific, include national-level capacity building, institutional development, and the creation of synergies between Climate Change Adaptation (CCA) and other issues. The EU will also invest in the sharing of experiences in CCA and mitigation throughout the region. It is committed to Ecosystem-Based Adaptation (EBA) methodologies as a means of building resilience and will lead efforts to develop workable donor coordination structures. The EU will support regional workshops and joint meetings to prepare for climate change negotiations, perhaps including one on REDD+ for SIDS.⁵⁵

The Pacific region also currently receives assistance from the €21 million programme "Capacity Building related to Multilateral Environmental Agreements (MEA) in African, Caribbean and Pacific (ACP) Countries". This programme assists PICs to comply with obligations under the provisions of Multilateral Environmental Agreements (MEA) to which they are party, including the UNFCCC (for a list of the MEAs applicable to the seven JICA target countries, see Annex D). Much of this assistance will be channeled through SPREP, building its capacity to act as the lead regional technical resource for climate change issues in the Pacific. ACP funds (US\$135,000) have also been committed to a Forest Law Enforcement, Governance and Trade (FLEGT) project in the Solomon Islands, in partnership with FAO, entitled 'Improving Forest Governance in the Solomon Islands through the Development of a Multi-Stakeholder Action Plan Process'. This project will link closely with the UN-REDD country programme for the Solomon Islands.

USAID

Although not specifically targeted at REDD+, the US has pledged USD \$21 million to the Pacific for climate change adaptation work in 2011-2013. Support to the Pacific region is currently administered from Manila, but USAID offices are soon to be opened in PNG and Fiji. Fiji already hosts a USAID office for environmental support, which has just closed applications for a small grants program. Since 2007, USD \$600,000 has been disbursed through this small grants program.

⁵⁵ www.gcca.eu

Annex I: REDD+ Strategies for Mid-sized and Small PICs

The SPC/GIZ regional project focuses on the needs of the Melanesian countries which contain large areas of rainforest and for which REDD+ promises clearer and more substantial benefits than it does for mid-sized and small island countries. Mid-sized and island atoll countries, unlike the Melanesian PICs, will not benefit from REDD+ strategies focused on reduced deforestation. REDD+ in these countries must address the specific challenges that they face in the forestry sector.

To identify these challenges, and the REDD+ activities that may help to address them, we draw chiefly on the experience and insights of two ENGOs active in the region; IUCN and Conservation International.

A 'Portfolio Approach' to REDD+

The additionality of afforestation/reforestation (A/R) projects for the voluntary carbon market or the Clean Development Mechanism (CDM) depends in large part on the *financial viability* of a project, or rather its financial non-viability without the additional carbon revenue. Such '*investment additionality*' requires the project developer to demonstrate that the project activity is less financially viable than the legal alternatives available (Streck, 2010). A/R projects are not expected to generate carbon revenue in exclusion to timber sales or other forms of revenue; indeed carbon-related income is generally only a small part of total revenue from these projects (EcoSecurities, 2007). However, since activities under REDD+ programmes cannot usually be expected to produce income-generating by-products, carbon sales will need to cover most, if not all, of the implementation and transaction costs.

The term 'portfolio approach' emerged during discussions between the consultant team and IUCN regarding the role of REDD+ in PICs. The portfolio approach recognises that, particularly in small and mid-sized island states, the revenues that may result from REDD+ financing are likely to be insufficient to meet the implementation and transaction costs of the activities required. The volume of emissions sequestered or avoided, and the value accorded these emissions by REDD+ financing options, are too low. Therefore, REDD+ will not be sufficient to meet the key challenges that these countries face in the forest and land-use sector. However, rather than rejecting REDD+ as an instrument of forest policy it should instead be considered as one component of a portfolio of financial mechanisms which, when implemented together, constitute a financially viable programme of activities.

This approach builds on the fact that all investments and programs in the land-use sector are interrelated, particularly in island ecosystems. In Samoa, this is expressed by the MNRE as the 'reef to ridge' concept (SOPAC, 2007), though to date this has been referred to mostly in the context of Integrated Water Resource Management (IWRM) rather than to land-use planning and development. In a recent report on the lessons of ARCDM projects, the World Bank confirmed that:

"Policymakers will need to address the interface of all land-use activities (e.g., A/R, REDD+, agriculture) through an integrated approach" (World Bank, 2011).

A portfolio approach will allow cross-financing between different instruments, using the profits of one land use category to subsidise others. For example, biomass energy plantations, which cannot be considered as a methodology for either ARCDM or REDD+, may generate revenue which can be used to finance, alongside carbon revenue, the activities under a national REDD+ strategy. This may be particularly appropriate in the context of a country like Samoa, which, due to the spread of taro blight, has significant areas of fallow land that could be used for biomass plantations. The World Bank report also notes that landscape-level integration of land-use and energy sectors would be more practical and cost-effective than continuing to consider forest sector financing in isolation.

For small and mid-sized PICs, the decision on whether to explore REDD+ as a source of forest sector financing may not be based on the cost effectiveness of REDD+ strategy implementation as a distinct mechanism. It may instead be based on the potential for REDD+ finance to contribute to a portfolio approach to financing an integrated land-use planning strategy. The six components of REDD+ Readiness may still apply, but their application, and their costs, will be spread across a broader range of land-use policy mechanisms and programmes.

Within a portfolio approach to land-use and forest sector financing in PICs, it is necessary to identify the activities that REDD+ may contribute towards. Such activities must not only fall within one of the five categories outlined in Table 5 but also contribute over the long-term to a net reduction in carbon emissions, and provide sustainable solutions to the key challenges facing forest managers in the PICs.

Based on the distinguishing environmental features of mid-sized and small PICs that result from their small land and forest areas, and the dominance of coastal ecosystems, the consultant team recommends that the following two activity areas be prioritised for REDD+ strategies in these countries:

1. **Mangrove restoration and conservation:** 'Bio-shield REDD+', a joint adaptation/mitigation strategy informed by CI's work on mangrove restoration in the PICs, IUCN's MESCAL and PMI programmes, and recent advances in methodologies for carbon accounting in mangrove ecosystems by the international Blue Carbon Working Group.
2. **Native forest restoration through invasive species control:** 'Island REDD+', informed by the work of CI and MNRE on invasive species control in Samoa (supported by the Government of Japan), and the Pacific Invasives Learning Network (PILN), coordinated by SPREP.

Both invasive species control and bio-shields are clear examples of the practical management activities that Pacific-based REDD+ programmes would have to address. They involve high costs per unit of carbon sequestered, when compared to avoided deforestation strategies, and are likely to require alternative financing and marketing strategies to be viable.

Bio-shield REDD: Mangrove restoration and conservation

Blue Carbon

The term 'Blue Carbon' has emerged over recent years to describe carbon pools in coastal ecosystems. An international Blue Carbon Scientific Working Group has been formed, with financial support from CI, IUCN and UNESCO, and held its first meeting in Paris in February 2011 (CI/IUCN/UNESCO 2011)⁵⁶. A number of distinct pools are recognised within Blue Carbon, including coral reefs, coastal plankton and the open ocean itself. However, the Working Group has decided to concentrate efforts on three pools at the land/ocean interface where human activities have the greatest potential to affect the carbon balance: sea grass meadows, tidal marshes and mangroves.

Most carbon stocks in Blue Carbon pools are held within soils and sediments, even in mangroves, which of the three targeted ecosystems, has the most significant above-ground biomass. GHG emissions from the loss of these ecosystems are likely to be globally significant but studies are not yet well documented. Murray *et al* (2011) estimate that the annual emissions are between 300 and 900 million tCO₂e. The upper extent of this estimate is roughly equivalent to the total annual GHG emissions of Germany. To put this further into perspective, annual emissions from mangrove clearance may be as much as one third of the emissions caused by clearance of peatland, and up to 10% of total emissions due to deforestation (Donato *et al*, 2011). Blue Carbon ecosystems release stored carbon slowly hence the effects of the loss of these ecosystems on atmospheric GHG concentrations are long term; emissions will continue for many decades after conversion before all carbon is released. By the time these long-term emissions have ceased, one hectare of cleared mangrove may result in 3-5 times the emissions resulting from the clearance of one hectare of tropical forest (Murray *et al*, 2011).

Mangrove ecosystems

Over half of the total potential emissions from Blue Carbon pools are estimated to be from mangrove ecosystems. Although the mitigation potential of mangrove ecosystems is chiefly from avoiding ecosystem loss, unlike the other Blue Carbon pools, mangroves also hold potential for carbon sequestration through restoration and plantation activities. Mangroves sequester approximately 18.4 million tCO₂e globally, according to a report by IUCN (Laffoley and Grimsditch, 2009).

The term 'mangroves' can be used to describe both the ecosystem in general and the specific floral associations that have developed unique, specialized adaptations to life in an inter-tidal environment. These plants are salt-tolerant evergreen woody trees and shrubs found growing along deltaic swamps, lagoons, estuaries or on the soft substrate along reef flats. Mangrove ecosystems flourish at the interface between terrestrial and marine communities, and receive a daily input of water both from the ocean (tides) and from freshwater sources, along with sediments, nutrients and silt deposits from upland rivers (Woodroffe, 1987).

⁵⁶ Recommendations of the meeting can be found on the Blue Carbon Working Group website at http://www.marineclimatechange.com/marineclimatechange/bluecarbon_2.html

Mangroves are distributed latitudinally within the tropics and subtropics, reaching their maximum extent between 25°N and 25°S. Perennial mangroves generally cannot survive frost and the richest mangrove communities occur in areas where the water temperature is greater than 24°C in the warmest month.

Mangroves and REDD+

As the only Blue Carbon pool that can be classified as forest, mangrove ecosystems are where Blue Carbon overlaps with REDD+. There is still a degree of uncertainty regarding whether mangroves are eligible for inclusion in REDD+ strategies (Murray *et al*, 2011). However, there is little dispute that mangroves are a type of forest ecosystem. Hence, pending explicit guidance from UNFCCC to the contrary, it should be assumed that they are indeed eligible. More than their status as forests, it is their status as a land-based ecosystem that merits debate. Mangrove areas that cannot be classified as terrestrial would imply legislative hurdles for their inclusion in REDD+, as well as uncertainties over tenure. This is ultimately a matter for national governments to address, but regional-level guidance from ENGOs and CROP agencies, through a REDD+ portal, would be of great value.

Table 10: Mangrove areas in the PICs (FAO, 2007)

PICs	Mangrove area (ha)	% of total tree cover	Year of survey
PNG	410,000	12.3	2000
Fiji	42,464	36.7	1991
Solomon Islands	50,572	21.6	1993
Vanuatu	2,519	2.8	1993
FSM	8,564	133.8	1983
Samoa	370	1.4	1999
Tonga	1,305	19.8	1997
Cook Islands	n.a	n.a	n.a
Kiribati	258	3.4	1995
Marshall Islands	n.a	n.a	n.a
Nauru	2	100	1999
Niue	3,000	157.9	1981
Palau	4,708	117.7	1985
Tuvalu	40	40	1993
Total	523,802	13.0	

However, even assuming that mangroves may be included in national REDD+ strategies, there remains work to be done in measuring carbon fluxes in these ecosystems. Experts within the international Blue Carbon Working Group are currently developing a methodology for mangrove restoration under the Voluntary Carbon Standard (VCS). The approval of this methodology will be an important step towards integrating mangrove forests into REDD+ strategies.

Mangroves in PICs

The Blue Carbon Working Group identified the Coral Triangle (encompassing PNG, the Solomon Islands, the Philippines and parts of Indonesia) and Micronesia as hotspots for potential GHG emission reductions or sequestration through mangrove ecosystems.

Mangrove ecosystems in the PICs decline in diversity from east to west. Mangroves do not naturally occur east of American Samoa due to difficulty of propagule dispersal over such a large distance. In addition, some islands may have lower number of mangrove species due to a lack of suitable intertidal habitat (Ellison, 2001).

The most recent estimates suggest that mangroves presently occupy about 14.6 million ha of tropical and subtropical coastline (McLeod et al., 2006). The Pacific Islands contain approximately 3% of this global mangrove area. Though a small area in global terms, each island group in the Pacific has a unique mangrove ecosystem, including a number of endemic species, varieties and specialized associations (Gilman et al. 2006). Table 10 gives the latest available country-level data on mangrove areas in PICs. There is clearly some degree of inaccuracy evident when comparing the reported mangrove areas with the latest data on forest and tree cover from the FAO GFRA 2010. The mangrove areas for FSM, Niue and Palau were last surveyed in the 1980s, when they apparently exceeded the present day total forest and tree cover of their respective countries. It is not clear whether, in these and other cases, mangrove areas were considered part of the national forest estate or were measured separately, but there has undoubtedly been a dramatic loss of mangrove ecosystems in the region over recent decades. Estimates of this decline over the past 50 years range between



Figure 7: Boulder lifted onto house by 2004 typhoon in Niue

30-50% of total mangrove area across the globe (Donato *et al*, 2011). Some of this has been due to sea level rise and the lack of suitable areas for inland migration of mangrove ecosystems, but aquaculture and settlement expansion have been greater drivers of mangrove clearance in the Pacific, as elsewhere. There is no doubt that in several PICs, the impact of mangrove loss is highly significant at national level (e.g. at least 10% of total land area in Palau), though the global impacts are small (FAO, 2007).

If sea levels continue to rise at a rate of 2mm per year in the Pacific, as in the last few decades, this could result in a loss of 13% of the current area of mangroves in the PICs by 2100, regardless of other drivers (Gilman *et al*, 2006), with particularly serious losses on small islands and atolls.

Bio-shields: Mangroves and adaptation

To date, mangroves have been considered as an element of climate change adaptation strategies, rather than mitigation strategies. The importance of mangroves for coastal zone protection has been demonstrated in numerous instances, notably during the tsunamis of

2004 (Aceh), 2009 (Samoa) and 2011 (Japan). Mangrove forests have been shown to significantly reduce the impact of tsunamis by lessening the height and velocity of the waves and distributing the water among various creeks and channels (EJF, 2006).

In recognition of this function, mangroves have been dubbed ‘bio-shields’ by CI and other ENGOs. Some countries, such as Malaysia, have made significant efforts to restore mangrove ecosystems in the wake of tsunamis. However, many PICs persist with the construction of sea walls of stone and concrete as their chief defence against future natural disasters. Such constructions, far from being effective defences, can become missiles during tsunamis and typhoons, with rocks of up to a ton being carried far inland, causing danger to life and property (see Figure 7).

Moreover, mangroves serve as habitats for economically valuable fish species and filters for pollutants. Promotion of mangrove protection and restoration activities as part of pilot REDD+ strategies for mid-sized and small PICs therefore brings substantial benefit to local communities beyond the value of emissions avoided or carbon sequestered.



Figure 8: Mangrove restoration in Samoa

Proposed research for Bio-shield REDD

Activities under the National Pilot Outcome under the Regional REDD+ Readiness Support Strategy may therefore include action research on the potential for ‘Bio-shield REDD’, whereby mangrove restoration and protection could generate carbon revenue.

The objectives of this research would be:

- To verify efficiency of new VCS methodology for mangrove restoration in the context of mid-sized and small PICs
- To demonstrate carbon sequestration potential of mangrove restoration activities and attract private sector investment for a nationwide bio-shield programme in Samoa (see Figure 8)
- To identify potential sites for community-based mangrove conservation and restoration initiatives in Samoa

This work will be implemented in partnership with, and draw on the existing experience of, CI and MNRE’s bio-shield programme and IUCN’s MESCAL project.

Island REDD: Native forest restoration and invasive species control

The threat of invasive species in the Pacific

In many PICs, the main threat to forests is not deforestation but forest degradation in the form of ecosystem loss as a result of the spread of invasive species. Island ecosystems are particularly vulnerable to this threat, due to their isolation from competition and thus the inability of their constituent species to adapt to new ecological niches.

Most invasive species of flora and fauna were introduced deliberately by human populations, in waves of settlement over the last 3,000 years. Recent introductions of species for commercial or subsistence plantation, amenity value, pest control or feed for livestock have been particularly damaging. Due to the spread of these introduced species, the rate of extinction of native species has been higher in the PICs than anywhere else in the world (Sherley *et al* 1999).

Invasive plant species often spread from plantations to land previously cleared for agriculture. The very characteristics that make a plant suitable for cultivation, such as fast growth, disease resistance, tolerance of drought, etc. are the same traits that make them such effective colonisers. Invasive plants grow and spread rapidly when the canopy is opened up and are very difficult to remove. Not all invasive species are introduced. For example, one of the most pervasive weeds in the Pacific is the native weed *Merremia peltata*, a creeper with the local name *Fue* in Samoa (and similar names on neighbouring



Figure 9: The exotic silk tree dominates the forest canopy on Upolu Island, Samoa

islands), the spread of which has been aided by excessive canopy clearance. Introduced species which have become invasive include the Silk Tree (*Albizia chinensis*), African Rubber Tree (*Funtumia elastica*), Mexican Rubber Tree (*Castilla elastica*), Batai (*Paraserianthes falcataria*) and the African Tulip Tree (*Spathodea campanulata*). The African Tulip is particularly resilient and is noted throughout the Pacific, particularly Fiji, as a weed (SPREP/SPC, 2009).

The extent of the problem with invasive species has been investigated since 2007 through the Mt Vaea Ecological Restoration project, funded by JICA and implemented by MNRE with technical assistance from SPREP and CI (Bonin, 2010). The project is the first of its kind in terms of exploring invasive weed management in Samoa and in the wider Pacific region.

In most PICs very little has been done to map and record the spread of invasive species. The Mt Vaea project therefore laid down an important yardstick for research into this topic by

confirming that 70% of all the stems of canopy trees on the Mt Vaea Reserve belong to the five invasive exotic species listed above. Figure 9 shows the forest canopy on the ridge of Upolu island, just beyond Mt Vaea, dominated by a single exotic species, *A. chinensis*.

The costs of ecological restoration

The spread of invasive species is not only a threat to unique island biodiversity, it also causes harm to local livelihoods through the decline of native forest species of subsistence or economic importance. Moreover, the wider ecological impacts are unpredictable; a change in the dominant plant associations will affect local fauna, hydrological and nutrient cycling and cause knock-on socio-economic impacts. These latter impacts may be positive in the short term, particularly if the invasive species have multiple uses, such as *Leucaena leucocephala*. However, in the long term the cost of the disturbances caused are likely to outweigh any short-term benefits.

It often takes several decades for an exotic species to display exotic or weedy tendencies but, once these tendencies become clear, it is no easy task to eradicate them from a natural forest ecosystem. CI and MNRE have concluded that chemical treatment is the only viable solution to eradication of the five major exotic invasive tree species in Samoa (Bonin, 2010). Trials of these treatments are currently underway, and CI is prepared to roll out successful treatments in other PICs.

This is a very cost-intensive approach to forest conservation. However, the financial and labour costs associated with the trials on Mt Vaea do not reflect the likely costs of a nationwide invasive species control programme. Economies of scale would apply to bring costs down, but any financially viable control strategy would require an extensive network of community-level actors and, if based on chemical herbicides, a detailed capacity building programme. Availability of skilled, low-cost labour is likely to be a key limiting factor in the success of such a control programme.

The Pacific Invasives Learning Network (PILN), coordinated by SPREP, has been set up to assist ventures such as the Mt Vaea restoration project spread lessons on invasive species control across the region⁵⁷. Despite the inherent difficulty in eradicating weedy tree species, the region holds one advantage in this respect over other parts of the world – it is geographically distinct. The small size and isolation of the PICs offers opportunities for eradication that are not feasible on larger land masses (PILN, 2007).

Island REDD: Forest Restoration through Control of Invasive Species

Whereas Bio-shield REDD can be clearly linked to a net reduction in GHG emissions, the concept of Island REDD – achieving restoration of native forest ecosystems through control of invasive species – is less clear in terms of delivering emission reductions. In the short to medium term, efforts to control or eradicate invasive species may well have an adverse impact on emissions. For example, removing 70% of dominant stems on the north slopes of Upolu Island on the basis of invasiveness will not lead to a net gain in carbon stocks.

⁵⁷ <http://www.sprep.org/piln/topics/PILN-Info.htm>

Restoration of native forest ecosystems is a long term objective, requiring time frames of fifty years or more. Even though it is likely but not certain that native cover will eventually lead to higher carbon stocks than forests dominated by invasive species, the utility of REDD+ as a part of a global climate change agreement may have expired before these gains are secured. It will have either assisted the transition to a global low carbon economy, or failed to do so.

However, if active measures are not taken to restore native ecosystems under REDD+ strategies in the PICs, there is a strong possibility that much of the gains in forest carbon stocks will come through the spread of invasive species. Although this may not trouble those concerned with achieving emission reduction targets, this situation may flout the REDD+ environmental safeguards currently under discussion within the UNFCCC and will be an undesirable outcome for biodiversity conservation.

Island REDD will entail very high transaction costs in terms of research and implementation, particularly community-level labour costs, and the returns in terms of emission reductions will be low. But REDD+ strategies on mid-sized and small PICs will not be feasible without an approach that addresses the issue of invasive species. A portfolio approach, as described above, will be necessary to subsidise invasive species control activities under REDD+. It is also important to investigate options for maintaining the carbon stocks of invasive tree species in long-term carbon pools. For example, *Albizia* species produce workable light construction grade timber.

Proposed research for Island REDD

Activities under the National Pilot Outcome of the Regional REDD+ Readiness Support Strategy should include research into Island REDD, in partnership with (and building on the work of) MNRE, CI, SPREP, FAO and JICA. The objectives of this research will be as follows:

- Develop low-cost, effective methodologies for control of invasive species and promotion of native species regeneration, which can be implemented through a community forest network
- Monitor the contribution of invasive species to carbon stocks and fluxes in REDD+ pilots across the Pacific region, e.g. in LLEE and CI voluntary REDD projects in Fiji
- Identify economically-viable options for long-term retention of carbon stocks in the biomass of invasive species, e.g. timber utilisation
- Pilot community-based payment systems for Island REDD based on management inputs, rather than carbon accounts
- Document and value the contribution of native forest ecosystems to climate change adaptation and economic resilience of local communities

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