



Fiji REDD+ Strategy Workshop Report

Compiled by Carbon Partnership Ltd. for
SPC/GIZ Regional Programme -Coping with Climate Change in the Pacific Island Region and
the Fiji Forestry Department

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Report prepared for SPC/GIZ by Sean Weaver of Carbon Partnership Ltd.

Dr Sean Weaver, Principal, Carbon Partnership Ltd.
81 Severn St, Island Bay, Wellington 6023, New Zealand. Ph +64 4 383 6898,
email: sean.weaver@carbon-partnership.com
Web: www.carbon-partnership.com

With contributions from:

Dr Ian Payton, Landcare Research Ltd,
PO Box 40, Lincoln 7640, Canterbury, New Zealand. Ph +64 3 321 9854
Email: paytoni@landcareresearch.co.nz

Prof. Dr Martin Herold, Chair of Remote Sensing, Center of Geo-Information
Department of Environmental Science, Wageningen University
Droevendaalsesteeg 3, 6708 PB Wageningen, The Netherlands
Ph: +31 (0)317 481276; email: martin.herold@wur.nl

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Executive Summary

The SPC/GIZ Pacific-German Regional Program on Adaptation to Climate Change in the Pacific Island Region (ACCPIR) held a Fiji National REDD+ Strategy Workshop during 25-26 November 2010 in Suva to advance the Fiji REDD+ Programme by:

1. Providing an update on international policy, financing, and technical developments in REDD+
2. Undertaking multistakeholder consultations for the preparation of the Fiji REDD+ Strategy.
3. Advance the national forest carbon stock assessment.

The multistakeholder consultation process was undertaken to gather necessary information for the preparation of the Fiji REDD+ Strategy. The consultation themes followed the framework of the then draft Fiji REDD+ Policy:

- Scope and scale of activities
- Finance
- Monitoring Reporting and Verification (MRV)
- Pilot projects
- Safeguards
- Distribution
- Governance
- Education, Training and Research
- International Policy and Technical Engagement

Themes arising from the workshop consultation process are recorded together with a set of tasks forming the basis of the Fiji REDD+ Strategy, and available as detailed guidance for the implementation of specific Strategy elements.

INTERNATIONAL REDD+ POLICY, FINANCING, AND MRV DEVELOPMENTS

International REDD+ developments have been principally driven by the policy (LCA) and technical (SBSTA) streams of the UNFCCC process, within the broader context of negotiations towards a post-2012 global climate change agreement. Earlier stages of the UNFCCC process intended that a UNFCCC REDD+ instrument would be complete by the end of 2009 (along with a completed post-2012 global agreement on climate change). Neither of these aspirations of the UNFCCC were met at the end of 2009 and as such an International REDD+ agreement has stalled while post-2012 agreement negotiations continue. There has been UNFCCC progress in (technical) MRV aspects of REDD+ with a decision at COP-15 in Copenhagen on MRV matters, and further details elaborated during 2010.

Irrespective of the progress at the UNFCCC policy level, there is an emerging consensus on REDD+ development processes starting with policy and strategy development, moving to 'readiness' involving the establishment of national forest carbon MRV systems, followed by implementation involving emission reduction activities supported by incentive payments and quality assured by MRV systems. This broad framework is relevant to the UNFCCC process, as well as other international REDD+ initiatives including UN-REDD, the World Bank Forest Carbon Partnership Facility, and the Interim REDD+ Partnership. Funds have been flowing towards national level REDD+ policy/strategy and readiness (capacity building) in developing countries in anticipation of a future UNFCCC instrument or regional agreements that may arise should the UN process fail to deliver a global agreement in time for the end of 2012.

FIJI REDD+ STRATEGY CONSULTATION

The multistakeholder consultation sessions undertaken in breakout groups through the course of the Workshop provided an opportunity to gain agreement on key tasks for the national REDD+ Programme that could be incorporated into the National REDD+ Strategy. These key tasks are arranged in themes aligning with the Fiji REDD+ Policy as follows:

Task 1 – Financing: Strategic Financing Plan for National REDD+ Implementation

Develop a 'Strategic Financing Plan for National REDD+ Implementation' for the national REDD+ Programme that takes into consideration the themes identified in the 'Financing' breakout group at the National REDD+ Strategy Workshop in November 2010 and documented in this report. This Plan will clarify the national approach to REDD+ implementation financing in terms of:

- Defining the specific design and configuration of the 'hybrid' model of REDD+ implementation financing payments (national, programmatic, and project scale activities) as specified in the National REDD+ Policy.
- Defining a means of maximising the potential direct and indirect benefits to Fiji and indigenous landowners arising from REDD+ activities.
- Use Strategic Financing Plan for National REDD+ Implementation to inform the scale element of pilot activities.

The 'Strategic Financing Plan for National REDD+ Implementation' to be incorporated into the National REDD+ Guidelines (cf. Task 19).

Task 2 – Financing: REDD+ Country PIN

Prepare a REDD+ Country PIN (Programme Idea Note) to generate an estimate of the overall potential value of the National REDD+ Programme to the national economy in terms of potential financial inflows from capacity building and implementation activities. This REDD+ Country PIN will also identify the national scale co-benefit potential arising from the National REDD+ Programme (including social, economic, biological diversity, climate change adaptation, water security, and food security co-benefits).

Task 3 – Scope: REDD+ Activity Matrix

Use the information presented here from this breakout group discussion to inform the design and development of a REDD+ Activity Matrix. The REDD+ Activity Matrix will be used as tool for strategic decisions relating to REDD+ implementation. The REDD+ Activity Matrix will prioritise REDD+ activity types in relation to carbon benefits, ease of implementation, co-benefits, and safeguards. The REDD+ Activity Matrix to be incorporated into the National REDD+ Guidelines (cf. Task 19).

Task 4 – Scale

Use information identified in the ‘Scale’ breakout group at the National REDD+ Strategy Workshop in November 2010 and documented in this report to inform the Strategic Financing Plan for REDD+ Implementation (cf. Task 1). The Strategic Financing Plan for REDD+ Implementation is to be incorporated into the National REDD+ Guidelines.

Task 5 – Distribution: REDD+ Distribution Plan

Use information identified in the ‘Distribution’ breakout group at the National REDD+ Strategy Workshop in November 2010 and documented in this report to inform the preparation of a ‘REDD+ Distribution Plan’. The ‘REDD+ Distribution Plan’ is to be incorporated into the National REDD+ Guidelines (cf. Task 19).

Task 6 – National Forest Area Change Assessment: Consolidation

Consolidate National Historical Forest Area Change Assessment by:

- Acquiring additional data from 2010 (urgently), probably ALOS AVNIR (SOPAC, GTZ).
- Process data from 1991, 2001, and 2010 for change detection analysis, including co-registration (SOPAC).
- Document an agreed methodology for forest area change assessment including a suitable forest definition (SOPAC, Forestry, international expert).
- Implement mapping of forest area change for 2 periods 1991-2001 and 2001-2010 using image-to-image interpretation and 0.5-1 ha MMU (SOPAC + Forestry).

Task 7 – National Forest Area Change Assessment: Training and Capacity Building

- Participation and training of at least one Fiji Forestry Department staff to work on the image analysis with SOPAC.
- Re-activate GIS/RS national team on forest mapping (lead: Forestry).
- Develop a capacity building plan for Forestry to take on remote sensing assessment, including human resources, technical, Hard-Software etc. (SOPAC + Forestry).
- Arrange training for using IPCC LULUCF GPG (GTZ).
- Develop synergies with GTZ/SPC regional REDD+ programme.

Task 8 – National Forest Area Change Assessment: International Engagement

- Participation of Fiji experts in relevant international meetings (e.g. UNFCCC, GOFC-GOLD, World Bank, Coalition of Rainforest Nations) – potentially with the support of international policy and technical experts.
- Engage in remote sensing research activities (i.e. through the EU funded project by Wageningen University) to complement REDD+ readiness activities (Consider

cooperation with Silviculture Research and Management Services Division) (Goal: agreement signed, activities started). High priority research topics include:

- Time-series analysis to track forest change and degradation.
- Use of multiple remote sensing data sources (i.e. Radar).
- Accuracy assessment procedures.
- Biomass mapping.
- Data management and access.
- Exchange of graduate students with Forestry Research Division (i.e. Wageningen University, Forestry).

Task 9 – National Forest Carbon Monitoring: PSP

Check and evaluate outcome of 11x11 km grid PSP measurements:

- Assessment of variability (and biodiversity) and need for further stratification
- Assessment of ability of PSP measurements to capture different carbon relevant forest management activities (deforestation, afforestation, degradation).
- Clarify whether carbon stock change measured in the PSPs.
- Clarify methodology for measuring aboveground carbon (trees) with particular reference to height data.

Task 10 – National Forest Carbon Monitoring: Wood Density

Check availability of wood density of commercial species:

- More wood density measurement activities should be supported
- Group species into wood density classes where no specific information is available
- Measure wood density of more species (focus on important species) – link to REDD+ Research Plan.
- Define species with high priority

Task 11 – National Forest Carbon Monitoring: Long Term Plots

Check the availability and documentation of measured long-term plots (high priority)

- Conservation areas
- Forestry research department (Thomson and Nakavu plots), in Drawa, Nakavu reports – same design as national PSP plots but no carbon stock assessment
- USP (biodiversity, ecological) – plan to re-measure.

Task 12 – National Forest Carbon Monitoring: Mangroves

Incorporate mangroves into the National Forest Carbon Monitoring Programme by:

- Establishing PSPs in mangrove areas
- Clarify the allometric equations to use from other regions
- Collaborate with projects working on Mangroves (e.g. MESCAL – IUCN, IKI project).

Task 13 – National Forest Carbon Monitoring: Carbon Pools

Clarify carbon pool measurements by:

- Clarifying below ground pool estimation by compiling data on existing root to shoot ratios

- Undertaking research to fill data gaps on root to shoot ratios if any gaps exist by clarifying litter pool estimation by undertaking litter carbon pool research focusing on specific forest types where the litter pool is significant.
- Clarifying soil carbon pool estimation methodology in the context of mangroves and other wetlands (i.e. where soil carbon stocks and stock change is likely to be significant).
- Enhancing the accuracy of PSP plot measurement by using methods capable of capture degradation impact on the carbon pool.

Task 14 – National Forest Carbon Monitoring: Stratify PSPs

Further stratifying the PSPs by:

- Deciding whether to include indigenous forest as one entity or as different carbon pools (above ground live, above ground dead, below ground live, soil carbon, litter).
- Adapting plot design to plantations.
- Determining how many plots are required to capture the variability of the forest.
- Minimizing the variability within one strata.

Task 15 – National Forest Carbon Monitoring: Training

Use information from this breakout group summary on MRV Training and Capacity Building to inform a REDD+ Education, Training and Research Plan (cf. Task 30).

Task 16 – National Forest Carbon Monitoring: Data Management Plan

Prepare a REDD+ Data Management Plan using information from this breakout group discussion and incorporating:

- Design elements of a back-end capable of meeting the technical requirements of forest carbon data management as part of a National REDD+ Programme
- Design elements of a user-friendly front-end interface to minimise operational management costs and increase accessibility and seek an exemplar from a data management system supplier.

Task 17 – Safeguards: Guidelines for REDD+ Safeguards

Use information identified in this breakout group discussion to inform the preparation of a set of 'Guidelines for REDD+ Safeguards'. The 'Guidelines for REDD+ Safeguards' is to be incorporated into the National REDD+ Guidelines (cf. Task 19).

Task 18 – Governance: Establish REDD+ Steering Committee

Department of Forestry prepares a proposal for the establishment of the REDD+ Steering Committee and submits this proposal to the Climate Change Country Team for approval. The proposal will contain the following elements as determined by the National REDD+ Strategy Workshop in November 2010 and documented in this section (3.7) of this report:

1. Composition of REDD+ Steering Committee
2. Rules of the REDD+ Steering Committee
3. Terms of Reference of the REDD+ Steering Committee
4. Structure of the REDD+ Steering Committee

Task 19 – Governance: Draft National REDD+ Guidelines

REDD+ Steering Committee to appoint a Technical Sub-committee to prepare the Draft National REDD+ Guidelines with elements as determined by the National REDD+ Strategy Workshop in November 2010 and documented in this report above. Deadline for the Draft National REDD+ Guidelines (Version 1): 30 June 2011.

Task 20 – Governance: REDD+ Guidelines Consultation

Technical Sub-committee of REDD+ Steering Committee to undertake a 3-month public consultation process for the Draft National REDD+ Guidelines as determined by the National REDD+ Strategy Workshop in November 2010 and documented in this report above. Deadline for completion of the consultation process: 30 September 2011.

Task 21 – Governance: Finalise REDD+ Guidelines

Technical Sub-committee of REDD+ Steering Committee to prepare final draft of National REDD+ Guidelines following input from the public consultation process. Deadline for completion of final draft National REDD+ Guidelines: 20 October 2011.

Task 22 – Governance: REDD+ Guidelines Cabinet Paper

Department of Forestry to prepare Cabinet Paper on National REDD+ Guidelines, and submit Cabinet Paper to Cabinet Subcommittee. Deadline for submission of Cabinet Paper: End October 2011.

Task 23 – Governance: REDD+ Legal and Regulatory Review

- Regulate (where necessary) REDD+ implementation activities
- Clarify forest carbon property rights and transfer rules
- Clarify institutional arrangements and linkages (including NLTB role and rules)
- Clarify REDD+ distribution issues where appropriate (e.g. tax liabilities and incentives)
- Task 24 – Pilot Projects
- Preparation of a National REDD+ Resource Database that includes maps of different potential activity type locations, land tenure, forestry concessions, and existing and planned land management activities in each of these areas (cf. Fiji REDD+ Country PIN).

Task 24 – Pilot Projects: National REDD+ Resource Database

Preparation of a National REDD+ Resource Database that includes maps of different potential activity type locations, land tenure, forestry concessions, and existing and planned land management activities in each of these areas (cf. Fiji REDD+ Country PIN).

Task 25 – Pilot Projects: Develop Two Pilot Projects

Design and implement two pilot projects as Inception Projects for a programme of activities, and define how the programme will be implemented. The first Inception Project to be an IFM-RIL activity type. The second Inception Project to be an A/R activity type. The A/R Inception Project will involve a subset of the Fiji Pine eligible area and be designed to extended as a programme to the rest of the Fiji Pine lease areas where possible, with the potential to be used by other A/R project initiatives outside the Fiji Pine estate. Pilot projects to include:

1. Specification of carbon market standard and path to market
2. Methodology that takes account of the need to minimise complexity and project development and transaction costs
3. Project Description Documentation (PDD)
4. Strategy to address safeguards that include community and biodiversity considerations
5. Carbon credit marketing options

Task 26 – Pilot Projects: Fiji Forest Carbon Facility

Consider the establishment of a ‘Fiji Forest Carbon Facility’ (FFCF) as an executive agency of the REDD+ Steering Committee, complete with terms of reference and resourcing considerations. FFCF to be responsible for designing and implementing pilot projects and facilitating the implementation of associated programme of activities for each activity type. FFCF to also act as a technical advisory body to the REDD+ Steering Committee.

Task 27 – Pilot Projects: Clarify Regulations

Clarify regulations on relationship between government and private sector REDD+ activities (cf. Task 23).

Task 28 – Pilot Projects: Clarify Hybrid Approach

Clarify the strategic design of the ‘Hybrid’ approach within the context of the ‘Strategic Financing Plan for National REDD+ Implementation’, with particular reference to:

1. The interaction between different scales of the Hybrid (national, programme and project scale implementation activities)
2. The interaction of the different financing options and scales (e.g. voluntary and compliance carbon markets)
3. Financing and distribution at different scales (cf. Task 1 – Financing)

Task 29 – International Policy and Technical Engagement

Develop and implement an International REDD+ Policy and Technical Engagement Plan using information provided in this section (3.9), and Section 3.5 of this report, consistent with the REDD+ Policy and the REDD+ Policy and Scoping Consultation Report. Incorporate this Plan into the National REDD+ Guidelines (cf. Task 19).

Task 30 – Education, Training and Research

Prepare a REDD+ Education, Training and Research Plan using information gathered from each subsection of Section 3 of this report, Section 4 of this report, the Fiji REDD+ Policy and Scoping Consultation Report, and incorporating elements from international REDD+ training manuals.

The Education component will identify the range of educational capacity building needed for successful implementation of the national REDD+ Programme, suitable educational delivery agencies, and potential resourcing for such educational delivery.

The Training component will identify training needs of different stakeholders, training delivery agencies (including in-country capacity, outsourcing, and training capacity building), training

costs, potential sources of additional funding, and synergies with other related training programmes (cf. Task 15).

The Research component will identify data, information, and knowledge gaps for the successful implementation of the Fiji REDD+ Programme; identify information already gathered by this programme that could be published in research publications; resourcing needs for research, and possible sources of funds and human resources to complete priority research tasks.

Part 1 – Project Overview

The SPC/GIZ Pacific-German Regional Program on Adaptation to Climate Change in the Pacific Island Region (ACCPIR), in close collaboration with its regional partner organisation, the Secretariat of the Pacific Community (SPC) and main national counterparts, the Fiji Forestry Department and the Fiji Department of Environment, is working towards the development of a REDD+ Programme appropriate for Fiji and its people.

A national planning workshop held in June 2009 in Suva, Fiji identified 3 phases for the Fiji REDD programme:

Phase 1: Policy and scoping – output “National REDD Policy”

Phase 2: Detailed planning – output “National REDD Strategic Action Plan”

Phase 3: Implementation – output “National REDD strategy outcomes and monitoring”

In August and September 2009, a national REDD policy and scoping exercise saw more than forty stakeholders actively contributing to the development of a draft national REDD+ Policy for Fiji. The draft policy supports the development and implementation of a Fiji REDD+ programme. The national REDD+ Policy defines the REDD Programme as a “course of action taken by government and stakeholders to take Fiji through the REDD Readiness phase and to successfully access carbon financing mechanisms”.

Phase 1 was successfully implemented with the finalisation of the draft REDD+ Policy in July 2010 followed by cabinet approval in December 2010.

The ACCPIR project undertook a National REDD+ Strategy Workshop on 25-26 November 2010 to undertake the stakeholder consultation work necessary to prepare the Fiji REDD+ Strategy. This Fiji REDD+ Strategy will serve to guide REDD+ activities and to translate policy recommendations into action. The REDD+ Strategy addresses the following components:

- a. The national REDD+ Policy principles and conditions.
- b. National forest area change and monitoring.
- c. National forest carbon stock inventory and change estimation.

A team of international REDD+ consultants was engaged to assist the development of the Fiji REDD+ Strategy. The main objective of the consultancy was to develop a national REDD strategy for Fiji that:

1. Effectively respond to the national REDD+ Policy.
2. Support policy and legislation efforts to address the drivers of deforestation and forest degradation in Fiji.
3. Define a national forest monitoring system for REDD+.
4. Comply with international requirements and standards.
5. Support Fiji’s eligibility to participate in international carbon and climate related financial instruments.

The consultancy also:

6. Undertook the measurement of forest carbon stock to enable Fiji to proceed to the IPCC Tier 2. This included capacity building of local counterparts as part of this process.
7. Assisted in the finalisation of the Fiji Forest Cover Change Assessment.

The technical carbon inventory component required close collaboration with the Fiji Forestry Department and other relevant institutions.

Three experts were involved in the consultancy: A REDD Policy Expert (Weaver); a REDD Measurement, Reporting and Verification (MRV) remote sensing expert (Herold); and a Forest Carbon Inventory Expert (Payton).

1. REDD Policy Expert

The REDD Policy Expert (Weaver) was the Principal Consultant for this mission and therefore responsible for the delivery of the stated outputs.

In close collaboration with SPC/GIZ Pacific-German Regional Programme on Adaptation to Climate Change in the Pacific Island Region (ACCPiR), the Fiji Forestry Department, the REDD MRV remote sensing expert, and the REDD forest carbon inventory expert, the REDD Policy Expert delivered the following:

1. Guided stakeholders in the development of a National REDD+ Strategy by:
 - a. Drawing from the findings and recommendations of the 2009 Fiji REDD Policy and Scoping Consultation Report.
 - b. Adhering to the (then) draft National REDD+ Policy principles.
 - c. Considering international requirements and developments on REDD+.
 - d. Encouraging a participatory and interactive consultative process.
2. Facilitated the National REDD+ Strategy Workshop and prepared and delivered appropriate resource materials and information to facilitate the identification of viable REDD+ Strategy elements for Fiji.
3. Ensured that the Fiji REDD+ Strategy:
 - a. Is coherently structured with implementation strategies and plans of action clearly defined.
 - b. Supports and complements policies, legislations, strategies and plans that deter the drivers of forest-based carbon emissions, and encourage the drivers of forest-based carbon sinks.
 - c. Elaborates on institutional processes to support the implementation of REDD+ Projects in Fiji.
 - d. Considers safeguards as defined in the draft REDD+ Policy.
 - e. Addresses capacity gaps identified in the policy scoping report in order to effectively implement the National REDD+ Programme.

- f. Defines instruments for international policy engagement.
- g. Identifies appropriate measures for accessing REDD financing mechanisms.

In fulfilment of the contracted outputs required by this consultancy the Principal Consultant (Weaver) submitted to the SPC/GIZ ACCPIR the following:

- (i) A Fiji National REDD Strategy workshop report (this report).
- (ii) A draft National REDD+ Strategy for Fiji that clearly elaborates on the implementation of the Fiji REDD+ Programme (separate report: Weaver 2011).
- (iii) A forest carbon inventory report (separate report: Payton and Weaver 2011).
- (iv) Recommendations for Fiji forest cover change methodology (incorporated into Section 3.5 of this report).

Part 2 – Workshop

Presentation Information

The National REDD+ Strategy Workshop involved a series of presentations to provide updates on the following:

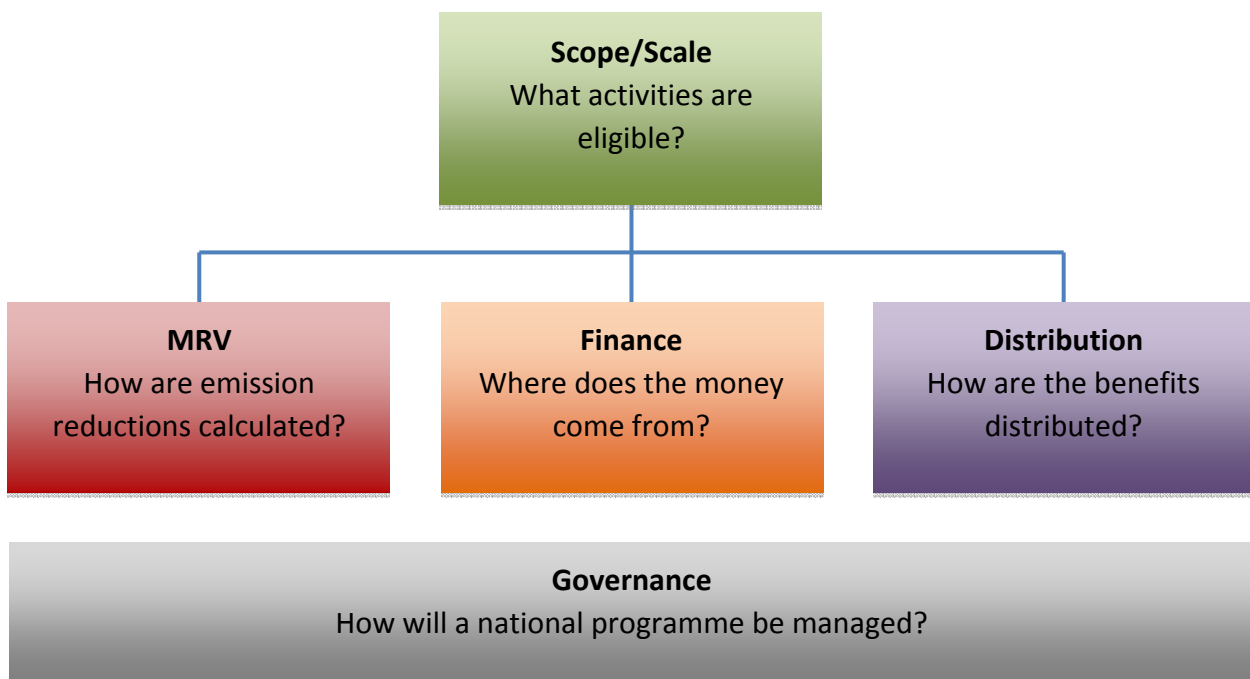
- International policy and finance developments in REDD+
- Fiji progress on REDD+
- Fiji's Position in CBD & REDD+ Negotiations
- The Fiji REDD+ policy

Each of these topics will be summarised in the sections below.

2.1 INTERNATIONAL POLICY DEVELOPMENTS IN REDD+

The basic architecture of a national REDD+ programme will need to include a set of key components¹ as indicated in Figure 1.

Figure 1. Key Components of National REDD+ Programmes



¹ See Parker et al 2009. The Little REDD+ Book available here:
<http://www.globalcanopy.org/main.php?m=117&sm=176&t=1>

International and domestic policy focuses on each of these themes. In international policy development, the core concern from a climate and carbon accounting point of view is focused on Scope/Scale, Finance, and MRV. The purpose of the entire REDD+ sector is to create an efficient and effective path between the source of finance for REDD+ on the one hand, and quantitative carbon stock change arising from REDD+ implementation activities on the other. For this reason there is a strong strategic link between the design of REDD+ financing instruments, and the design of monitoring, reporting and verification (MRV) systems².

The main international policy settings for REDD+ are the UNFCCC, Multilateral Development Banks (MDBs), multilateral and bilateral donors, domestic climate policy, the voluntary carbon market, and non-UN international REDD+ forums (e.g. the REDD+ Partnership, Coalition of Rainforest Nations). The UNFCCC has taken the lead in international REDD+ policy development as part of the negotiating process towards a post-2012 intergovernmental climate change agreement.

The UNFCCC and its activities will potentially dominate the REDD+ sector in coming years but presently activities on the ground are being driven outside the UNFCCC process (e.g. by the World Bank Forest Carbon Partnership Facility, the voluntary carbon market, and multilateral and bilateral donor activity). This is because policy instruments and financing mechanisms for REDD+ are still undergoing development at the UNFCCC. This is being undertaken as part of the Long-term Cooperative Action (LCA) – the policy and financing stream of the UNFCCC process. From a technical point of view, however, the UNFCCC process has already made considerable progress towards establishing a firm foundation for how REDD monitoring, reporting, and verification (MRV) will be undertaken. This technical work has been undertaken within the UNFCCC Subsidiary Bodies for Scientific and Technological Advice (SBSTA).

This resulted in the draft text on methodology for REDD produced by SBSTA in their 31st session in November 2009 in Copenhagen. The text is called '*Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.*' This SBSTA-31 text was adopted (as a decision) by the 15th Conference of Parties (COP-15) to the UNFCCC (also in Copenhagen), in December 2009³.

This decision makes it clear that the UNFCCC REDD framework will include reduced emissions from deforestation and degradation, and three additional activity types:

- Forest conservation
- Sustainable forest management (SFM) and

² See Weaver 2010 for a presentation explaining REDD+ Financing and Activity Types.

³ Provided in Appendix 4 below.

- Forest enhancement

The combination of reducing emissions from deforestation and forest degradation and three elements are usually jointly referred to as 'REDD+'.

The COP-15 decision also refers to the need to establish monitoring systems that use an appropriate combination of remote sensing and ground-based forest carbon inventory approaches, with a focus on estimating anthropogenic forest-related greenhouse gas emissions by sources, removals by sinks, forest carbon stocks and forest area changes.

All estimates should be transparent, consistent, as accurate as possible, and should reduce uncertainties, as far as national capabilities and capacities permit. It is further indicated that these monitoring systems and their results will be open to independent review as agreed by the Conference of the Parties (COP). The COP-15 decision makes particular reference to the need to involve local communities in measuring and monitoring carbon stocks.

The international UNFCCC negotiations are converging on a growing consensus on REDD+ with further clarification arising from COP-16 in Cancun, Mexico in December 2010.

Part III (C) of the COP-16 decision at Cancun⁴ relates specifically to REDD+ in and states that activities undertaken by developing country Parties (reducing deforestation, reducing forest degradation, forest conservation, sustainable management of forests, enhancement of forest carbon stocks) should be implemented in phases:

1. The development of national strategies or action plans, policies and measures, and capacity building.
2. 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. Results-based actions that should be fully measured, reported and verified.

Annex I of this decision⁵ presented guidance on safeguards relating to REDD+ activities and policy frameworks, while Annex II requests that the Subsidiary Body for Scientific and Technological Advice (to the UNFCCC) continues to:

- Identify activities linked to drivers of deforestation and forest degradation and identify methodological issues to estimate emissions and removals arising from these activities (and report at COP-18 in 2012),
- Develop operational modalities on national reference level for forest sector emissions and national MRV system (for consideration at COP-17 in 2011), and

⁴ See Appendix 5 below for full text.

⁵ See Appendix 5

- Guidance on safeguards specified in Annex I of the decision (for consideration at COP-17 in 2011).

The COP-16 REDD+ decision Part III (C) paragraph 76 also urges developed country Parties:

“to support, through multilateral and bilateral channels, the development of national strategies or action plans, policies and measures and capacity-building, followed by the implementation of national policies and measures, ... and results-based demonstration activities including consideration of the safeguards referred to in ... Annex I to this decision...”

This project encompasses an active response to this request for developed country support for REDD+ in developing countries, and will be guided by international policy and associated technical considerations arising from the UNFCCC process.

2.1.1 Clarifying Terminology: ‘REDD’ And ‘REDD+’

During the Kyoto Protocol negotiations the debate on forest carbon management in developing countries focused on the notion of avoiding deforestation (AD) given the recognition that approximately 20% of anthropogenic GHG emissions resulted from deforestation – predominantly in developing countries. For pragmatic political reasons AD was excluded from the Kyoto Protocol when its forest rules were finalised in 2001.

The issue of avoided deforestation then re-entered the UNFCCC policy process in 2005 with the inclusion of Agenda Item 6 at COP-11 in Montreal: “Reducing Emissions From Deforestation in Developing Countries: Approaches to Stimulate Action”. With this the acronym ‘REDD’ came into being with the second ‘D’ referring to ‘Developing Countries’.

Debate among scientists and UNFCCC Parties during 2006 and 2007 led to a shift in the emphasis of REDD to include forest degradation (swapping the second ‘D’ from ‘Developing’ to ‘Degradation’). This was because a large proportion of forest carbon stock change does not involve a change in land use from a forest to a non-forest activity (deforestation) but arises from activities that degrade the forest.

The boundaries of the REDD policy debate continued to evolve through 2008 to 2010. To clarify - reducing emissions deforestation and forest degradation are activities that reduce the rate of carbon emissions from forest sources (**reducing source**). But forests are also reservoirs of carbon that may not be emitting carbon quite yet but could in future be turned into carbon sources if they were degraded or deforested. Forest conservation therefore came into the UNFCCC REDD policy framework (**protecting reservoir**). Furthermore, it became increasingly clear to negotiators that addressing the drivers of forest carbon emissions commonly went hand in hand with the sustainable management of forests and the enhancement of forest carbon stocks through new forest plantings (**enhancing sinks**). The inclusion of forest conservation, sustainable management of forests and enhancing

forest carbon sinks in the international REDD policy framework comprise the ‘+’ in the term ‘REDD+’.

The REDD+ elements entered the debate at the insistence of countries (e.g. Vanuatu’s submission to the UNFCCC in 2007) that have low historical deforestation rates, but either have nationally or regionally active deforestation drivers, and/or experience significant rates of forest carbon loss through logging activities that do not result in land use change (e.g. high intensity selective logging).

A definition of forest was agreed in the Marrakech Accords in terms of tree canopy cover, height and area thresholds. Countries may select a canopy cover threshold of between 10 and 30%, with a height minimum of between 2 and 5 meters (of trees at maturity), and an area criterion with a minimum of 0.1 hectares. Any area of woody vegetation (regardless of whether it is locally defined as forest or woodland or wasteland) that drops below the threshold is considered to have been *deforested*, in other words, it has undergone change from forest to non-forest (e.g. to agriculture, pasture, urban development).

Reducing Emissions A – Deforestation

Deforestation is indicated in Figure 2 by abrupt drop in the red line. Loss of forest followed by a change in land use that prevents the natural forest re-growth usually results in carbon emissions per hectare until the area stabilises at a considerably lower carbon stock. The prevention of deforestation in a particular area, and reducing the rate of deforestation for the country as a whole are the key climate change mitigation actions associated with deforestation.

Reducing Emissions B – Forest Degradation

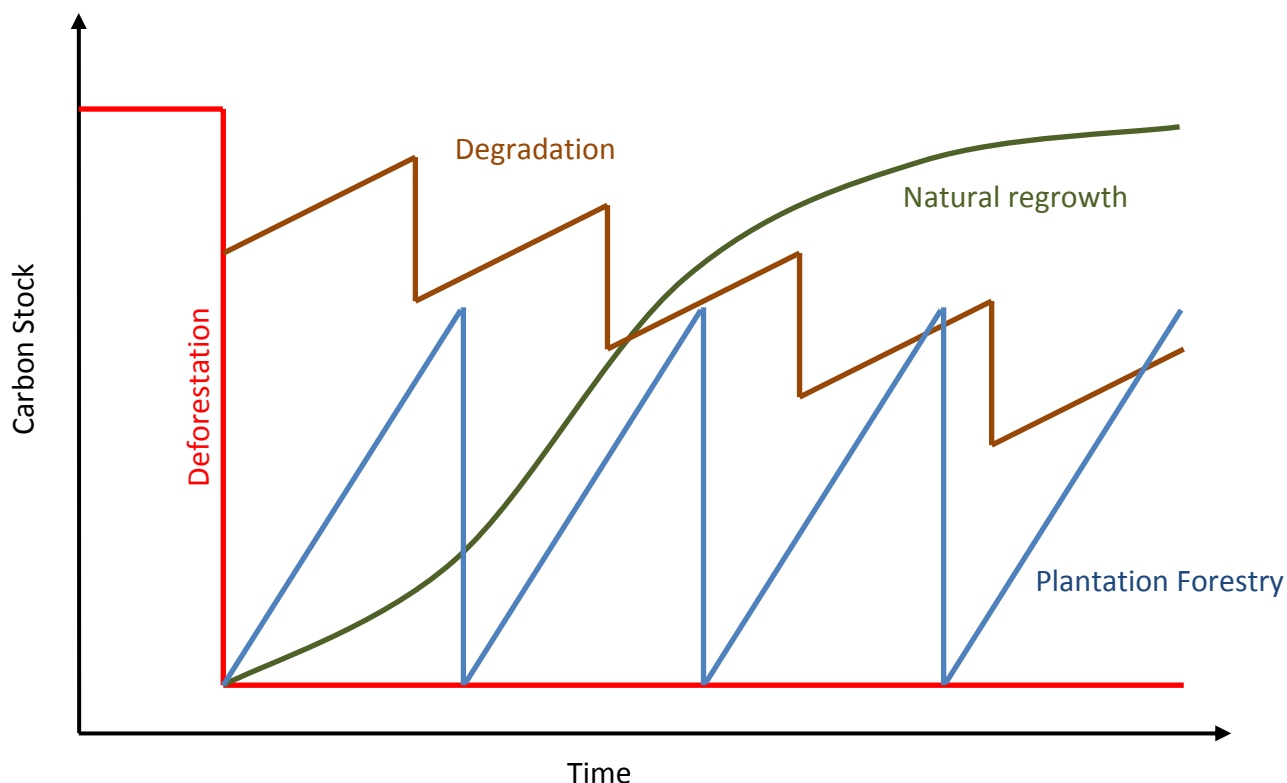
*Degradation*⁶ refers to loss of carbon stock within forests that remain forests (Figure 2, brown line)⁷. This is a specialized use of the term degradation, which in normal forestry terminology is an umbrella concept relating to loss of a variety of forest values. It is in fact often loosely used as synonymous with ‘deforestation’, as a cursory Internet search of images of ‘degradation’ makes clear. A group convened by IPCC to resolve the definition of degradation was unable to produce a clear definition because losses of biomass in forest may be temporary or cyclical and therefore essentially sustainable, even if on average the carbon stock remains below that of intact forest. Realizing that in addition to the variables used to define deforestation, a time element was also required – the IPCC expert group also recognized that selecting such a threshold is very difficult. This is in part because forest growth cycles are usually much longer than commitment or accounting periods under

⁶ From the point of view of climate change policy and the IPCC national estimation and reporting guidelines.

⁷ It is important here to distinguish between the concept of a *degraded forest*, which has a reduced carbon stock which could remain stable or increasing below the level of a primary forest for years, not contributing any further CO₂ emissions, and the process of degradation, which implies a continuing loss of stock.

climate change treaties. A special UNFCCC workshop on degradation convened in 2008 discussed various methodological issues relating to degradation, but although some suggestions were made, the meeting did not result in a clear definition.

Figure 2. Concept Diagramme of Forest Carbon Stock Change Through Time



The IPCC report however does make clear that there are different forms of degradation relating to different human uses of forest. In the REDD discourse, most references to degradation refer to location-specific attacks on otherwise intact forest, which occur episodically, as in selective commercial logging in rain forest. This may or may not be followed by clearance for agriculture (deforestation) - a study in the Amazon suggests that full clearance only occurs in 30% of the area which has been logged over, a further 30% re-grew within 4 years, while the fate of the remaining 40% could not be determined as the logging was very recent (Krug, 2008).

Other forms of degradation are less visible but may be much more widespread, as they are caused by gradual processes which continue year after year, primarily as a result of community uses of forest products where population densities are increasing, such as in dry forests and savannah woodlands of sub-Saharan Africa. It is important to understand that while the UNFCCC concept of degradation is related to carbon stocks, and will be defined in these terms, degradation in everyday terms refers to the anthropogenic processes which drive the carbon losses, and an understanding of these processes will be essential quantify and to forecast these carbon losses in the long run as well as to design policies to combat it.

Protecting Carbon Reservoirs – Forest Conservation

Forest conservation concerns the protection of existing carbon stocks located in a forest carbon reservoir. Such carbon reservoirs may not be carbon sinks because they comprise mature forests that no longer grow in biomass annually.

The concept of forest conservation is new to the UNFCCC REDD discussions in the sense that no similar forest-related concept has been agreed upon before by the Parties. The following considerations are important in understanding the role of forest conservation under REDD+:

- It is an effort to decrease the threat that the forest may become a source of carbon emissions in the future and to ensure permanence by establishing long-term commitments to preserve forest.
- It implies that human activities in such areas are minimal, and in sum, will result in a net zero carbon balance in the near and long-term.
- It will result in the continued supplies not only of carbon but also of other ecosystem services, provided the ecosystem is kept intact.

The monitoring objective is to verify that in the forest labelled 'conservation forest' (i.e. through a policy), the carbon stocks remain stable and intact. How to create performance-based incentive payments for forest conservation under REDD+ remains conceptually difficult, and may require instruments rather different from those used for the other REDD+ elements. Many Parties to the UNFCCC are clear that all forests (including those in which there are no changes in carbon stocks) should be considered for carbon stock management incentives – even where no contemporary anthropogenic drivers are posing a particular risk. In this context, the idea of carbon reserves has been proposed, such that a minimum amount of forest carbon is maintained in a country or specific area.

Enhancing Carbon Reservoirs – Sustainable Management of Forests

Enhancement of forest carbon stocks may be achieved through a number of human activities such as enrichment planting and may also be related to *sustainable forest management* (SFM). SFM is a term usually used in the context of commercial timber operations and in this sense it might be better described as sustainable yield management. But there are other ways in which forest may be managed sustainably, for example through community forest management (CFM), which may be much less concerned with timber than with firewood, fodder and non-timber products. Such programmes have been operating in Nepal and India for 20 years already and have become popular also in other countries.

Another activity type relevant to the sustainable management of forests is 'Improved Forest Management' – as defined for example in the Agriculture, Forestry and Other Land Uses sector of the Voluntary Carbon Standard. Improved Forest Management or IFM concerns changes in the way forest carbon stocks are managed in a 'forest remaining as forest' activity (as defined by the IPCC). IFM can include increasing the rotation age, reduced impact logging, and forest protection. Shifting an activity from a forest degradation activity to a sustainable forest management or forest protection activity would constitute the avoidance or reduction of forest degradation. It seems perhaps more logical to link forest degradation

(problem) with IFM (solution) under the overarching framework of ‘sustainable management of forest’ than keeping them as separate categories under REDD+.

Enhancing Forest Sinks

Enhancing forest sinks involves management interventions that create new carbon sink activities. New carbon sinks need to be established on non-forest lands, but can also be established in degraded landscapes that may or may not fit the definition of ‘forest land’ for the particular country. Either way, enhancing forest sinks is an important component of the overall REDD+ framework, and has particular relevance to addressing the drivers of deforestation and degradation. For example, in a country without a plantation forestry resource, there will tend to be more pressure on the indigenous forests. Once plantations are established, these areas can displace the need to use indigenous forests for timber production components of the land based economy. New forest plantations can also increase the net forest cover and net forest carbon stocks for a country.

Table 1. REDD+ Activity Spectrum

Mitigation Aim	Mitigation Objective	Land Use Change	Activity Type
Reduce Source	Reducing Deforestation	Yes	Reducing Deforestation Rate Converting Deforestation to Protected Forest Converting Deforestation to Sustainable Forest Management
	Reducing Degradation	No	Reduced Impact Logging Increasing Rotation Age
Protect Reservoir	Forest Conservation		Converting Degradation to Protected Forest Converting Degradation to Sustainable Forest Management
Enhance Sink	Enhancing Forest Growth		Converting Unprotected to Permanently Protected Forest
	Establishing New Forests	Yes	Afforestation / Reforestation / Agroforestry

2.1.2 REDD+ Financing Instruments

Forest carbon management that benefits the climate system is now becoming eligible for climate related finance through the UNFCCC process, multilateral and bilateral donors, carbon markets, and philanthropy. While there is little controversy over the need to protect and conserve forests for purposes of climate change mitigation and adaptation, there is more debate on how this should best be financed.

There are a number of different financing instruments for REDD+ activities separated into two broad categories: fund and market instruments. The two main uses for REDD+ finance are:

1. REDD+ Readiness (capacity building), and
2. Implementing emission reductions and/or sink removals arising from REDD+ activities (carbon benefits)

The different REDD+ financing options are shown in table 2.

Table 2. REDD+ Finance Options

REDD+ Finance Options			
Source of Finance		Use of Finance	
		REDD+ Readiness	Implementing Carbon Benefits
Fund Instrument	Public Sector	<ul style="list-style-type: none"> Domestic and international policy Strategies & plans Institutional strengthening Capacity building National MRV systems 	<ul style="list-style-type: none"> Demonstration activities Project-based activities (project development and incentive payments) Project-development (develop project that can then access carbon market incentive payments)
	Private Sector	<ul style="list-style-type: none"> Research Education & training National Reference Level 	<ul style="list-style-type: none"> Sectoral activities Incentivise policies and measures Implementation MRV⁹
Direct Market Instrument	Private Sector	<ul style="list-style-type: none"> Not suitable for national readiness activities Sometimes used for 	<ul style="list-style-type: none"> Project-based activities Sectoral (national) activities Implementation MRV

⁸ Multilateral development banks tend to act as facilitators and administrators of public sector finance rather than sources of the funds.

⁹ MRV = Monitoring, Reporting and Verification – sometimes referred to as ‘Measurement, Reporting, and Verification’.

REDD+ Finance Options			
Source of Finance		Use of Finance	
		REDD+ Readiness	Implementing Carbon Benefits
	<ul style="list-style-type: none"> Voluntary carbon markets Public Sector When governments buy carbon credits 	project development	
Market-Linked Instrument	Private & Public Sector Example: Auctioning of Assigned Amount Units to generate funds for REDD+	<ul style="list-style-type: none"> Same as fund instrument above 	<ul style="list-style-type: none"> Same as fund instrument above

There are a variety of different financing agencies for REDD+ operating independently but in parallel with the emerging UNFCCC process. These include multilateral development banks (MDBs), multilateral and bilateral donors, international NGOs, domestic emissions trading schemes, and the voluntary carbon market.

Multilateral Development Banks (MDBs)

The Multilateral Development Banks (MDBs) are active in the financing aspects of climate change policy and financing, both through their own initiatives and their contributions to the UNFCCC process. The advantage of MDB capability is that they can support REDD+ on the ground prior to the elaboration of an intergovernmental agreement on REDD+ as part of a post-2012 intergovernmental agreement on climate change.

The main MDBs are the World Bank, African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank Group. World Bank is most active MDB in REDD+ through the Forest Carbon Partnership Facility (FCPF), and also the Forest Investment Programme (FIP). The Forest Investment Programme is a programme within the Strategic Climate Fund (a multi-donor Trust Fund within the Climate Investment Funds). The FIP's overall objective is to mobilize significantly increased funds to reduce deforestation and forest degradation and to promote sustainable forest management, leading to emission reductions and the protection of carbon terrestrial sinks.

The Forest Carbon Partnership Facility assists developing countries make early progress in REDD+ through two financing mechanisms: the Readiness Mechanism (capacity building) and the Carbon Finance Mechanism (emission reductions). Most of the emphasis to date has focused on the Readiness Mechanism due to the fact that most developing countries still need to build capacity to enable evidence-based, incentivised emission reduction activities to occur in future.

The Readiness financing process involves¹⁰:

1. Developing country prepares and submits a Readiness Preparation Idea Note (R-PIN)
2. R-PIN is expert peer reviewed by Technical Advisory Panel (TAP) and then potentially accepted by the FCPF.
3. Acceptance of R-PIN enables developing country to become a REDD Country Participant. There are currently 37 REDD Country Participants – Vanuatu is the only small island state in this category and the only one from the Pacific Islands.
4. REDD Country Participants then prepare a Readiness Preparation Proposal (R-PP)
5. REDD Country Participants then prepare a Readiness Package (R-Package) and is thereafter considered REDD Ready (with a REDD+ Strategy, a Reference Scenario, a Monitoring System, and Management Arrangements).
6. REDD Country Participant then engages with the Carbon Finance Mechanism to access incentive payments for emission reduction activities at a national level.

The Asian Development Bank (ADB) established two carbon funds under its Carbon Market Programme¹¹: the Asia Pacific Carbon Fund (APCF) (which focuses on energy sector project activities), and the Future Carbon Fund (FCF) (which provides financial and technical support for Clean Development Mechanism (CDM) projects). It is conceivable that the FCF could support aspects of a REDD+ programme in the Pacific region due to the fact that afforestation / reforestation aspects of REDD+ are eligible activities under the Clean Development Mechanism, although the strong emphasis of the ADB Carbon Market Programme is on the energy sector.

Multilateral and Bilateral Donors

The principle global multilateral agencies contributing to REDD+ initiatives (excluding the multilateral development banks) are the UN-REDD Programme, and the Interim REDD+ Partnership. The UN REDD Programme is the United Nations Collaborative initiative on REDD in developing countries. The Programme (funded primarily by the Government of Norway) is designed to assist developing countries prepare and implement national REDD+ strategies, utilizing the capability of UN institutions such as the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP). This programme currently supports REDD+ Readiness activities in 29 developing countries.

¹⁰ See Forest Carbon Partnership Facility introductory presentation:

http://www.forestcarbonpartnership.org/fcp/sites/forestcarbonpartnership.org/files/Documents/PDF/Sep2010/FCPF_Overview_09-23-10.pdf

¹¹ See ADB Website: <http://www.adb.org/climate-change/cc-mitigation-carbon-market.asp>

The UN REDD Programme operates in three phases:

Phase 1: Developing a REDD+ strategy supported by grants ¹²

Phase 2: Implementing a REDD+ strategy, supported by (a) grants or other financial support for capability building, and enabling policies and measures, and (b) Payments for emission reductions measured by proxies. ¹³

Phase 3: Continued implementation of REDD+ strategy in the context of low-carbon development, payments for verified emission reductions and removals.

The Interim REDD+ Partnership¹² has the core objective of complementing the UNFCCC REDD+ policy and financing process by serving as a platform for the Partner countries “to scale up REDD+ actions and finance, and to that end to take immediate action, including improving the effectiveness, efficiency, transparency and coordination of REDD+ initiatives and financial instruments, to facilitate among other things knowledge transfer, capacity enhancement, mitigation actions and technology development and transfer”.

As of end of October 2010, the Partnership included the following 71 Partner countries: Angola, Argentina, Australia, Belgium, Belize, Brazil, Burundi, Cambodia, Cameroon, Canada, Central African Republic, Chad, China, Colombia, Costa Rica, Democratic Republic of Congo, Denmark, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, **Fiji Islands**, Finland, France, Gabon, Germany, Ghana, Guatemala, Guyana, Honduras, India, Indonesia, Italy, Japan, Kenya, Laos, Madagascar, Malaysia, Mali, Mexico, Nepal, the Netherlands, Nigeria, Norway, Pakistan, Panama, **Papua New Guinea**, Paraguay, Peru, Philippines, Republic of Congo, Rwanda, Sao Tomé and Príncipe, Sierra Leone, Singapore, Slovenia, **Solomon Islands**, South Africa, Republic of Korea, Spain, Suriname, Sweden, Switzerland, Thailand, Togo, Uganda, United Kingdom, United States of America, **Vanuatu**, Viet Nam and Zimbabwe. Regional multilateral agencies include the Amazon Fund (which promotes REDD+ projects in the Amazon basin) and the Congo Basin Forest Fund¹³.

Regional multilateral initiatives also exist for REDD+ financing including the Amazon Fund, the Congo Basin Forest Fund (CBFF), and the Indonesia Climate Change Trust Fund (ICCTF).

Bilateral donors of specific REDD+ activities in developing countries include the governments of Australia, Denmark, Finland, France, Germany, Japan, Netherlands, Norway, Spain, UK, USA. Funds from these countries are either channelled directly to developing country partners (e.g. the current project is funded by the Government of Germany) or are channelled through multilateral REDD+ programmes such as UN-REDD, the REDD+ Partnership, and the World Bank.

¹² See the inception document for the Interim REDD+ Partnership here:

<http://www.oslocfc2010.no/pop.cfm?FuseAction=Doc&pAction=View&pDocumentId=25017>

¹³ As presented on the Interim REDD+ Partnership Website accessed in January 2011, and available here:

<http://reddpluspartnership.org/65230/en/>

An example of a bilateral initiative relevant to the Pacific region is the International Forest Carbon Initiative (IFCI) established by the Government of Australia, which disbursed \$66 million to PNG and Indonesia for REDD+ activities and capacity building.

The leading bilateral donor for REDD+ is Norway, which according to the REDD+ Financing and Activity Survey undertaken by the Interim REDD+ Partnership (see Interim REDD+ Partnership 2010), is prepared to allocate up to NOK 3 billion (approx. US\$500 million) annually for REDD+¹⁴.

International NGOs

Among the most prominent international NGOs active in supporting REDD+ initiatives are:

- Centre for International Forestry Research (CIFOR)
- Conservation International (CI) (active in the Pacific Islands with an office in Suva)
- The Nature Conservancy (TNC)
- The Wildlife Conservation Society (WCS)
- Winrock International

These organisations commonly provide technical, strategic, and logistical support to REDD initiatives, and sometimes also provide funding.

Domestic Climate Policies in Developed Nations

Domestic climate policy developments in some developed nations also have a bearing on REDD+ initiatives in developing countries. This is because domestic regulatory emissions trading schemes may end up including REDD+ activities as eligible sources of carbon credits in those domestic markets. Notable examples arise in North America with:

- The draft Federal emissions trading legislation in the United States (the American Clean Energy and Security Bill)
- The Regional Greenhouse Gas Initiative (RGGI) and
- The Western Climate Initiative (WCI)

Each of these domestic regulatory emissions trading initiatives have the potential to include the ability to purchase carbon credits from developing country REDD+ projects and in so doing would create a source of REDD+ finance from the private sector in the US and Canada.

New Zealand established a domestic emissions trading scheme in 2009. This instrument could potentially be modified in future to allow for the inclusion of REDD+ project credits at some stage depending on domestic climate change policy developments.

¹⁴ See REDD+ Financing and Activity Survey by the Interim REDD+ Partnership, available here: <http://www.oslocfc2010.no/pop.cfm?FuseAction=Doc&pAction=View&pDocumentId=24946>

Similarly, Australia and Japan may eventually end up with an emissions trading scheme with similar potential to provide a source of demand for REDD+ credits at some point in the future.

Furthermore, it is possible that the international community fails to negotiate a workable post-2012 international climate change agreement to replace the Kyoto Protocol when it comes to an end at the close of 2012. Should this occur, the emphasis may shift to regional emissions trading schemes like the European Union Emissions Trading Scheme (EU-ETS, and such regional schemes may include REDD+ activities in their eligible sources of carbon credits.

The Voluntary Carbon Market

While REDD+ policy and financing remains in development at the UNFCCC the voluntary carbon markets already exist as both a source of policy development and financing of what are effectively REDD+ demonstration activities in several different countries. The voluntary carbon market enables REDD+ projects to be undertaken prior to the availability of UNFCCC or other regulatory carbon market instruments.

The largest voluntary carbon market standard – the Voluntary Carbon Standard (VCS) has led REDD+ policy and financing in the voluntary carbon market arena. The VCS “Guidance on Agriculture Forestry and Other Land Uses (AFOLU) Projects”, and the VCS “Tool for AFOLU Methodological Issues” guide the technical specifications for REDD+ forest carbon projects under the VCS. In turn this guidance is informed by and consistent with the technical guidance and guidelines of the Intergovernmental Panel on Climate Change.

The other significant voluntary carbon market standard in the REDD+ space is the Climate Community and Biodiversity (CCB) standard. This standard, however, only quality assures the community and biodiversity co-benefits associated with a carbon project that has already had its carbon accounting quality assured by another international carbon standard. This usually means certification of the carbon component of a project by the Voluntary Carbon Standard (or possibly the ISO14064-2 standard), and the community and biodiversity components of a project certified by the CCB.

2.1.3 REDD+ Monitoring Reporting and Verification (MRV)

By Martin Herold and Sean Weaver

Incentive payments for REDD+ outcomes are designed to cause quantitative change in carbon stocks (emission reductions and sink removals) that are beneficial to the climate system. Furthermore, such quantitative change needs to be additional to what would otherwise occur without incentive payments. This creates the need for very detailed carbon accounting and financing procedures to ensure that REDD+ finance directly causes measurable and enduring REDD+ outcomes on the ground.

As such, the eligibility criteria for REDD+ implementation finance (emission reductions and/or sink removals) will commonly include detailed methodological requirements for monitoring, reporting and verification (MRV) of REDD+ quantitative outcomes.

International developments in REDD+ MRV have converged on a common set of principles, modalities, and methodologies that can be regarded as world's best practice. This common set of principles, modalities and methodologies have been developed through the Intergovernmental Panel on Climate Change (IPCC), the UNFCCC SBSTA process, and to some extent the voluntary carbon market. At the core lies the IPCC 2003 Good Practice Guidance for Land Use, Land Use Change, and Forestry (LULUCF), and the IPCC 2006 Guidelines for National Greenhouse Gas Inventories.

The two main considerations for forest carbon monitoring are:

1. Forest area change, and
2. Forest carbon stock change

Forest area change is undertaken by remote sensing whereas forest carbon stock measurement is undertaken by means of forest inventory on the ground combined with detailed maps commonly generated through remote sensing. As a result, forest carbon monitoring requires a combination of remote sensing and forest inventory activities.

Of particular interest to REDD+ financing is the difference between:

- a. The quantitative carbon balance situation without or prior to carbon financing (Baseline or Reference calculations)
- b. The quantitative carbon balance situation with or after carbon financing (Project or Programme calculations)

This is precisely what determines the quantitative effectiveness of carbon financing in terms of benefits to the atmosphere.

Other key areas of interest to national forest carbon monitoring include drivers, non-permanence risk, leakage, co-benefits, safeguards, the link between national and sub-national monitoring, and data management systems.

Drivers

'Drivers' refers to the human causes of carbon stock change. Drivers of emissions (e.g. deforestation and forest degradation) need to be understood if they are to be altered or removed. Drivers of carbon sink activity also need to be understood so that they can be encouraged and supported in national policy and programmes.

Non-Permanence Risk

'Non-permanence risk' refers to the threat that any carbon benefits will be short lived. Non-permanence risk needs to be analysed and addressed by means of the way REDD+ activities are designed and also through forms of insurance. One form of insurance is the

establishment of a 'buffer' area of forest where carbon benefits are generated but where such areas are not able to benefit from incentive payments. Such areas can then be used to 'back' incentive payments for areas that suffer non-permanence (e.g. when REDD+ activity location is burned or illegally logged).

Leakage

'Leakage' is also called 'displacement of emissions' and refers to the movement of an emission activity from one location to another when a REDD+ activity is implemented. An example of leakage would be when deforestation is stopped in one location only to shift to another location and where the overall carbon benefits from some form of carbon project or programme do not generate a net additional benefit to the atmosphere.

Co-Benefits

'Co-benefits' refers to other (non-carbon) benefits generated from a REDD+ activity. Co-benefits may include benefits such as climate change adaptation & resilience, biological diversity, cultural and community benefits. Some carbon finance instruments are focused only on carbon benefits, whereas others are interested in supporting activities that maximise the generation of co-benefits as well.

Safeguards

'Safeguards' refer to the measures undertaken to ensure that REDD+ activities are indeed beneficial to the community and the country when taking into account social, economic, cultural, and environmental considerations. For example, there is considerable concern internationally for the protection of the rights of indigenous peoples in the REDD+ sector. The protection of these rights can be enshrined in policies and carbon property rights legislation, and through locally and nationally determined quality assurance criteria for REDD+ activities. This is particularly relevant to REDD+ activities undertaken through the voluntary carbon market.

National & Sub-National Monitoring

The integration of national and sub-national monitoring is an important consideration in the design of national REDD+ programmes, to ensure the tracking of REDD+ activities, and to enable sub-national monitoring activities to be compatible with and contribute to national forest carbon data sets.

Data Management Systems

The management of data sets in a national forest carbon monitoring programme requires the design and establishment of a suitable data management system capable of supporting strategic decisions and international reporting. Poorly designed and ad hoc data management systems can significantly hinder the effectiveness of REDD+ programmes, with data held in different formats and by different agencies. The alignment of forest carbon (and

related) data, and the development of a user-friendly interface (e.g. Figure 3) are a valuable component of a well-functioning national programme.

Figure 3. Example of User-Friendly Forest Data Management System Interface



MRV Implications For National REDD Programmes

A key measure in quantifying the role of a forest in climate change mitigation is the sum of the carbon stored in its terrestrial pools (i.e. vegetation biomass and soil carbon). Any changes in forest carbon stocks that result from direct or indirect human activities have an impact on the climate. The overall goal is to reduce the amount of emissions to the atmosphere and to maintain or increase the overall terrestrial carbon pool. Thus, taken all together, climate change mitigation activities currently under discussion by the Parties to the UNFCCC are intended to encourage:

- The long-term conservation of forest, to maintain current, natural carbon reservoirs,
- A change in the human activities which impact on existing forests and cause carbon emissions, with a view to stabilizing or increasing terrestrial carbon stocks in these existing forests in the long-term,
- Change in human activities to create increases in the land area that is under forest, though new plantation.

These generic and fundamental objectives are addressed in the REDD/REDD+ and the IPCC 2003 Good Practice Guidelines on Land Use Land Use Change and Forestry (LULUCF). The task is to develop and reward policies that alter human activities so that they become more climate-friendly. However, associated with these policies is the need to measure and report the resulting carbon impact at the local, national and international level. The mechanics of

this will vary as the three generic approaches listed above have rather different characteristics, because they include both sink-enhancement and emission-reduction.

It is currently not practical nor efficient to measure and report on all stocks and changes in the global terrestrial carbon reservoir at a level of great detail. Moreover drivers and processes that have a carbon impact on the land cannot be fully modelled, so the size, location and timing of their effects are often difficult to predict. However it is clear that there is considerable interest in starting REDD/REDD+ activities right away and programmes for REDD Readiness such as the Forest Carbon Partnership Facility of the World Bank and the UN-REDD programme (a combined effort of UNDP, UNEP and FAO) are encouraging this, besides bilateral programmes of (e.g. NORAD and GTZ). The current primary aim should therefore be focused on how the three objectives noted above can best be addressed, given that:

- Current human land use impacts causing carbon emissions are concentrated in specific areas and regions and should ideally be addressed in the very near-term, although it is the long-term stabilization or increase of the terrestrial carbon reservoir as a whole that will determine the effectiveness of the policy as a whole
- Developing countries start from a diverse set of backgrounds in terms of historical drivers and changes in forest carbon expected future land use changes due to their development objectives, and current capabilities for measuring and monitoring forest carbon on the national and local level,
- Resources to address REDD and REDD+ will be limited and may not be able to address all issues everywhere at the same time. While all countries could in principle participate from the beginning, their entry points will vary and priority setting and efficient implementation strategies will be needed at the international, national and sub-national level.

Thus, we should understand the use of concepts like deforestation, degradation and conservation as means to provide agreed international frameworks and to scope and define practical and efficient implementation strategies (both as regards policies and as regards MRV) to enable countries and actors to get started with REDD and REDD+ actions. This should include the definition of long-term targets and the specification of near-term priorities. For example, in the case of national monitoring, it is not practical to measure each ton of carbon or each tree individually on a regular basis. However, it is possible and efficient to develop national monitoring systems in which higher levels of detail and certainty are available in the spatially limited areas in which REDD and REDD+ actions are initiated, to prove and verify their positive effects.

A country participating in REDD would need to decide where to place its major efforts, based on what policies and programmes are considered to be most effective in its own context, as it would be unlikely to be able to actively start interventions in all parts of its forest estate, at least in the early stages of the programme. A clear understanding of drivers and processes affecting forest carbon stocks on the national scale is essential to define priorities for a national REDD+ strategy and implementation program and to define priority areas of action

and MRV focus. Some parts of the forest may be selected for interventions designed to reduce degradation, and stimulate forest enhancement. Others may be targeted for reducing deforestation or carbon conservation.

What this implies is not only that areas with different drivers of deforestation or degradation will be treated with different REDD+ actions, but also that different approaches to MRV need to be taken in different areas. For example, conservation forests and deforestation will be primarily defined and measured in terms of area changes (or no area change in case of conservation), while degradation, SFM and forest enhancement should all be defined and measured on the basis of localized changes of stock within the forest. Thus from the point of view of MRV methodology to be used, degradation, SFM and forest enhancement essentially form one group, since all refer to “forest remaining as forests” as detailed in good practice guidance.

So while the first consideration for a country designing its REDD+ policy will be what REDD+ opportunities are suitable and feasible given its own ecological and political conditions, an immediate secondary concern will be its measuring and monitoring capabilities, both at national and sub-national levels, since as shown above the measuring and monitoring requirements are different for different types of REDD+ strategy choices. National systems for measuring and monitoring are feasible and should be the target for each country, although there may be different entry points and capacity building will need to be provided in many cases.

Although the gathering of ground level data for degradation, forest enhancement and SFM may seem a daunting task, particularly to countries which have never been able to field comprehensive forest inventories due to lack of resources, this is in fact a task that benefit from the engagement by local stakeholders; data collection could be a condition for participation in REDD+ activities. Community level forest stock inventory (and inventories by private landowners for example) could result in Tier 3 level data for those areas where management is actively practiced. In other areas that are not under such management (large under-populated areas put aside as protected or conservation areas for example) secondary data (gain-loss methods, generally Tier 2) might be used, with less accuracy. In other words, MRV procedures would be tailored to the mosaic of REDD+ strategies employed in different areas.

Monitoring Institutions And Synergies

Efficient and sustainable organizational capacity is required as the country moves into the Readiness phase, to establish and operate a national forest carbon MRV programme. Thus, there are some requirements for a national institutional framework from an MRV perspective:

- **Coordination:** A high-level national coordination and cooperation mechanism linking forest carbon MRV and national policy (for REDD+), also specifying and overseeing the different roles and responsibilities, and co-benefits with other monitoring efforts,

- **Measurement and monitoring:** protocols and technical units for acquiring and analyzing of different types of forest carbon related data on the national and sub-national level,
- **Reporting:** a unit responsible for collecting all relevant data in central database for national estimation and international reporting using the IPCC GPG, including uncertainty assessment and improvement plan,
- **Verification:** an independent framework for verifying the long-term effectiveness of REDD+ actions on different levels and by different actors.

Different actors and sectors need to be working in coordination to make the monitoring system efficient in the long-term. Sustainability considerations are an important principle in setting up an institutional framework for an MRV system. At a minimum, a country should consider maintaining the following institutions with clear definition of roles and responsibilities:

- National coordination and steering body or advisory board, including a national carbon registry;
- Central carbon monitoring, estimation, reporting and verification authority;
- Forest carbon measurement and monitoring implementation units.

The resources required for setting up and maintaining institutional capacities depend on several factors. Some countries may perform most of the acquisition, processing and analysis of data through their agencies or centralized units; others may decide to build upon outside partners (i.e. contractors, local communities or regional centres), or involve communities. It is important to note that the institutional framework needs to link MRV of actions and MRV of support.

Any compensation for REDD+ actions needs to be bound to a way of measuring the positive impact in the long-term for both actions and support. A specific sub-national implementation activity will need to be assessed in terms of the amount of forest carbon preserved (measurement), provide this data to the national level so it can be included in the national estimation and reporting system, and will need to be verified in terms of leakage (through systematic national monitoring), and permanence (long-term of assessment of compliance). The institutional framework for MRV of support should be directly linked to these requirements, so any compensation transactions would provide incentives to all actors. Thus, the national institutional infrastructure needs provide the foundation for countries to be inclusive and effective in setting up their REDD+ MRV.

The 3 E's criteria provide a tool to assess outcomes, but can also guide the development of a national MRV infrastructure:

- **Effectiveness** suggests that the MRV development is driven by the development and implementation of a national REDD+ policy and its areas of priority area of action;

- **Efficiency** suggests using transparent and consistent data sources and procedures, sets up an institutional infrastructure and establishes sustained capacities within the country able to report forest carbon changes using the IPCC GPG in the long-term;
- **Equity** suggests integrating local measurements, national-level monitoring estimation and international guidance, and supports independent review, to ensure participation and transparency among different actors involved.

In this sense policy development and implementation on one hand, and MRV on the other, follow similar fundamental concerns.

Along the same line, the issue of co-benefits and synergies of the MRV investments and activities need to be discussed on the national level. This issue will be different for different country circumstances, however, is driven by similar principles:

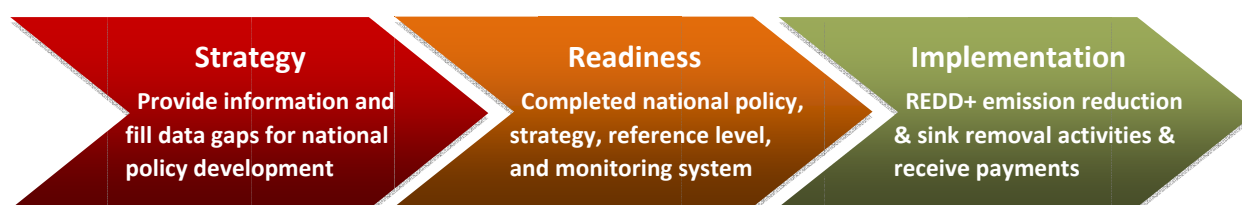
- The need to build upon existing national capacities, available data and forest monitoring activities that often have not been carbon focused,
- The requirement from the recent UNFCCC discuss to focus on the monitoring of drivers and safeguards in addition to forest carbon,
- The fact that REDD+ implementation is directly linked to sustainable development, land management, and preservation of other ecosystem services to be effective in the link-term,
- Joint monitoring activities for carbon and other issues is commonly complementary and often more efficient.

Perhaps, the need to focus on forest carbon is essential and the major focus of country capacity building, the way countries can address tangible synergies should be further investigated for specific circumstances.

Linking Monitoring And Policy Activities On National Level

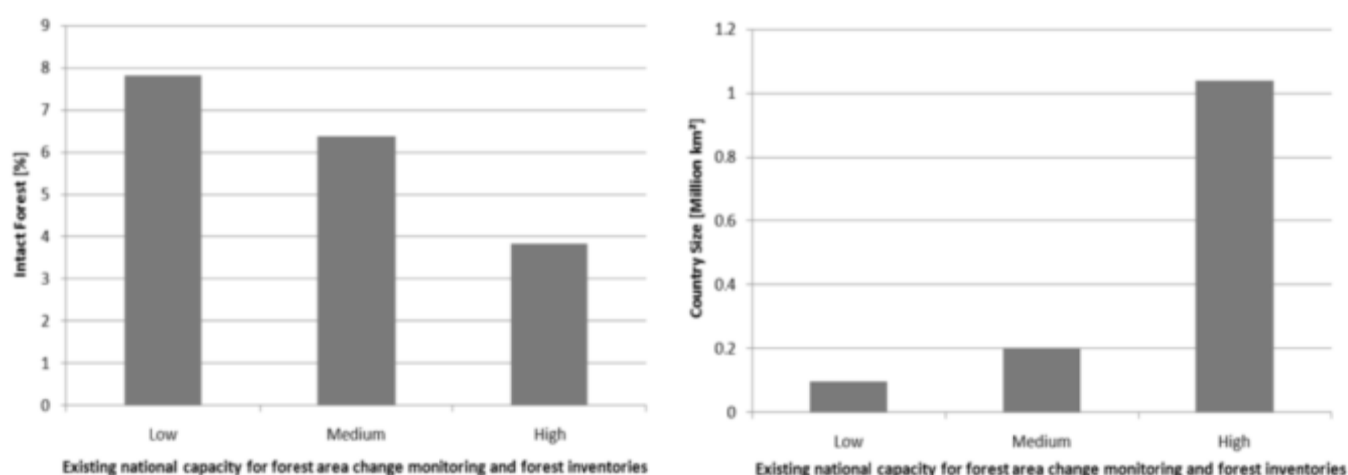
Each country will have to develop its MRV system to meet its specific package of REDD+ actions, while at the same time tailoring its selection of actions to what is feasible for it as regards MRV. However, some general suggestions and guidance can be provided. Figure 10 lists a set of essential steps each country has to consider in evolving the policy and technical issues in conjunction. The phase of strategy development and readiness maybe addressed rather quickly if a country has a suitable set of data and capacities. Some countries may, however, first have to establish initial datasets to provide a basic understanding of the extent to which drivers are active and what their forest carbon impact is and how policies can be defined and implemented to affect the drivers and processes. Thus, MRV does include a component of analysis and assessment that is essential to make use of the acquired data and information in a policy context (i.e. as suggested in the term MARV – Measurement, Assessment, Reporting and Verification).

Figure 4: MRV objectives for different phase of REDD+ participation



One issue of particular importance for establishing sustained capacities is the fact that smaller countries, and countries with more remaining intact forests have commonly not carried out much monitoring in the past (Figure 5). They would require more initial efforts to build the basic capacities for the national strategy, and need more time and effort in the readiness phase to provide all historical data for establishing the reference level. Thus, institutional development is of particular importance. The issue of regional sharing of institutional capacity for specific components of the MRV system (i.e. for remote sensing data processing and analysis) maybe an option for smaller countries in particular to ensure long-term effectiveness and sustainability.

Figure 5: Median values of remaining intact forest land (of total forest area) and country area for countries with either low, medium or high level of existing capacities¹⁵.



International policies and MRV concepts reflect an emission-oriented concept focusing on carbon impacts. National policy development should, however, take a more driver-oriented perspective assuming that successful national policies will need to target the key causes and processes that alter forest carbon on the ground. For an MRV roadmap, one needs an understanding of the drivers and processes active, whether sufficient data are available to

¹⁵ Source: Herold and Skutsch 2009.

assess their importance (carbon impact), and what policies could positively affect the processes to achieve REDD+ objectives.

Integrating National And Sub-National Measurement And Monitoring

A national REDD+ strategy needs to encourage specific local implementation actions. In this context, a national carbon monitoring system would reflect more detail and accuracy in these action areas, and, more specifically, a national estimation and reporting system needs to include sub-national or action area measurement plans. Thus, a suitable national monitoring strategy should include:

- A national monitoring, estimation and accounting system and a sub-national measurement plan addressing change in forest carbon and the key drivers of change in these areas
- A national stratification allowing all (area based) REDD and REDD+ implementation activities to be measured with a suitable degree of certainty (more accuracy in REDD and REDD+ action areas, lower density systematic monitoring in the rest). Such a national stratification may be based on forest carbon density and on types of human activities and REDD+ interventions.
- May include a system of sub-national, i.e. district-level, reference levels - suitable for large countries (i.e. Indonesia) and related reporting and accounting for carbon balance, displacement of emissions and permanence
- A national system should include a systematic component that helps sub-national activities to show their effectiveness, and would help to understand leakage and additionality within the country. It would also provide a framework for continuous monitoring to verify permanence.
- Reference to existing pilot projects, which may be useful in:
 - Providing measurements and data and information on forest change processes
 - Quantifying REDD/REDD+ achievements (i.e. through centralized carbon registry)
 - Demonstrating involvement of communities and key actors

With regard to this last point, in several countries REDD pilot and demonstration projects have already generated some experience and it may be possible to draw lessons from these regarding MRV. However, there are considerable differences between the project and that national approach. Firstly, while the data collected in association with such projects may give important indications of the likely gains and losses of carbon associated with different types of management activity, monitoring at project level often brings with it high costs relating to dealing with leakage and additionality, and there are other transaction costs involved; in a national approach, apart from benefits of economies of scale, many of these problems may be circumvented.

Secondly, existing pilot projects are local and often specialized in scope, for example located in areas with little or no conflict (i.e. land tenure), in areas of “high-risk, high-carbon” forests, and addressing only one, or a small handful of drivers. Broader issues that are

important for REDD+ effectiveness (e.g. relating to national regulatory frameworks, addressing land use policy, and involving the agriculture and energy sector), are not taken into account, nor, of course, the requirements of national MRV systems and baselines, so the lessons that can be learned from pilot projects are probably rather limited. A potential problem for many countries in moving from the project scale to the national programme will be incompatibilities with respect to existing definitions of forest, since in many countries woodlands, and particularly secondary and degraded woodlands, are not considered forests and not included in national forest statistics. Under a REDD carbon accounting system, all this would have to be changed.

Identifying Drivers Of Deforestation And Degradation With Remote Sensing

Understanding the drivers for deforestation and degradation is necessary to devise effective strategies to reduce emissions. Distal drivers, i.e. those factors that are the underlying causes such as international markets, trade policies, technological change and population growth, are not readily detectable with remote sensing. Economic and statistical analyses are approaches that can help unravel these distal drivers. Indicators of proximate drivers, i.e. those immediate activities that cause deforestation and degradation, are sometimes possible to detect with remote sensing. For example, large-scale agricultural clearing is readily detectable with accepted methods. Proximate drivers for degradation are varied and range from local fuel wood collection to wildfires.

Indicators can be used to infer the presence or absence of proximate drivers. Combining the presence or absence of drivers with the presence or absence of deforestation/degradation can suggest which drivers are most influential in particular places. For example, deforestation identified in areas of road expansion suggests (but does not prove) that road expansion is a proximate driver for the deforestation. Drivers may vary in different regions within a country, in which case region-specific strategies to reduce emissions would be most effective. For example, presence of large-scale agricultural clearing would suggest that policies aimed at large-landholders rather than smallholder farmers would be most effective in reducing deforestation in the region where large clearings are identified.

Remote sensing can provide information useful for assessing what drivers are present in particular locations. The size of deforestation clearings is a strong indicator of industrial vs smallholder agricultural expansion as a deforestation driver. Size can be determined from analysis of deforestation polygons mapped with Landsat-like sensors. Medium resolution data are useful for identifying the presence of new deforestation but cannot be used to accurately determine the clearing size except where the clearings are very large (>~100 ha). Remote sensing can also provide information on land use following deforestation, for example row crops or pasture. High temporal resolution from MODIS has proven useful for this purpose based on the higher NDVI of row crops during the growing season. Distinguishing among row crops or pasture as the land use following deforestation helps assess which commodities are deforestation drivers.

Remote sensing of drivers associated with degradation can suggest which policies might be effective in reducing degradation. The presence of logging roads indicates the possibility of unsustainable logging. The presence of burn scars indicates wildfire as a possible driver of degradation. Remote sensing is more problematic for indicators of degradation drivers such as local wood collection or forest grazing. High resolution and ground data are required, with no widely accepted methods for mapping these types of degradation.

Scenarios of future deforestation and degradation can be constructed based on understanding of which drivers are important and how they might occur in the future. Scenario-building must also account for biophysical features that determine where deforestation/degradation occurs. For example, deforestation for industrial agriculture is generally less likely on hill slopes or where precipitation is very high. Careful assessment of the economic, social and biophysical factors associated with deforestation/degradation in the particular national circumstance is needed to construct plausible future scenarios.

Safeguards To Ensure Protection Of Biodiversity

Compensation for REDD+ activities could possibly require documentation that biodiversity is protected. Species richness and abundance cannot be directly identified with remote sensing. Ground surveys of biodiversity are unlikely to be available in many locations and are not possible to cover all forest area within a country. Habitat quality of forests is an indirect proxy of biodiversity that could provide input for assessing this safeguard. For example, tree plantations generally maintain lower biodiversity than forests. In some cases tree plantations can be distinguished from forest with visual inspection of high-resolution data. Evolving technologies such as radar show promise in making this distinction although no standard methods have been widely applied. Remote sensing of forest type (e.g. deciduous, evergreen) based on spectral characteristics or phenological information might provide other indirect measures of habitat quality. Methods for determining forest type include visual and digital classification based on ground knowledge of forest types.

Safeguards For Knowledge And Rights Of Stakeholders

An important aspect of REDD+ implementation is assurance that knowledge and rights of stakeholders have been maintained. Ground-based information on forest dwelling communities, ownership and use rights of forests, and other non-remote sensing data are of primary importance for determining the effectiveness of safeguards. Remote sensing could aid this effort by delineating forest extent and changes in forest area within designated indigenous lands.

Monitoring Displacement Of Emissions And Permanence At A National Scale

Leakage or 'displacement of emissions' occurs if emissions increase in one area due to reductions of emissions in another area. Determining leakage at a national scale requires a consistent and transparent monitoring changes in forest area across the entire forest extent within a country's boundaries. For a large country, detailed monitoring across the entire forest extent can be prohibitive. Remote sensing data can assist in identifying "hot spots" of

deforestation to focus detailed analysis on those areas while checking whether deforestation has spread to areas outside the hot spots. Active fire monitoring might indicate locations with new deforestation. In addition, automated or visual analysis of time series of medium resolution (e.g. MODIS) data to identify areas of possible new deforestation would require less data processing than high resolution data over the entire forest extent. The key requirement is that the full national forest extent must be assessed to determine whether leakage has occurred at a national scale.

Remote sensing also has an important role to play in address the risks of reversals and verifying that REDD+ actions have a permanent positive impact in the long term. The advantage of consistent time series and the value to build satellite data archives that allow updated and retrospective analysis is a unique characteristic that remote sensing provides as data source.

2.1.4 Forest Inventory

By Ian Payton

Greenhouse gas (GHG) emissions (sources) or removals (sinks) from the forestry sector fall into one of three categories:

1. **Forest land converted to other (non-forest) land.** This is deforestation, and is always a source of emissions.
2. **Forest land remaining forest land.** This may be a source or a sink. Forests set aside for conservation purposes are likely to be sinks, at least until they reach an old growth stage where emissions balance removals. Forests managed for timber production may be sources or sinks, depending on the stage of the forest management cycle and the level of harvesting. Similarly, forest degradation will be a source of emissions while the forest continues to be degraded, but may become a sink where degraded forests are allowed to regenerate.
3. **Other (non forest) land converted to forest land.** These are new forests, which act as sinks by removing GHG's from the atmosphere.

The definition of forest land is country-specific, but within guidelines provided by the Intergovernmental Panel on Climate Change (IPCC).

Inventories to determine whether forestry sector activities are GHG sources or sinks are required to take account of carbon stocks in five broad pools. These are:

- Above-ground live – trees and shrubs
- Below ground – root biomass
- Dead wood – logs and fallen branches
- Litter – fine woody debris, dead leaves and humus
- Soil organic matter – carbon that has been incorporated into the mineral soil.

The IPCC guidelines outline three methodological tiers for estimating and reporting on GHG emissions and removals. The tiers correspond to a progression from simple equations using default data to country-specific data in more complex national systems.

Tier 1, which uses methods and default values outlined in the IPCC guidelines, is appropriate for countries where inventory data are scarce or absent.

Tier 2 uses a similar methodological approach, but with emissions factors (carbon stock estimates) and activity data (area change) which are more appropriate for the climatic regions and land-use systems of the country.

Tier 3 reporting is based on higher order methods including models and inventory measurement systems tailored to address national circumstances, repeated over time, and driven by high resolution activity (area change) data. Tier 3 methods result in a higher level of certainty than that of lower tiers, and have the ability to track changes in land use over time.

It is good practice to use methods that provide the highest level of certainty within the limits of the resources that are available.

- In addition, carbon inventory methodologies are required to be:
- Adequate – capable of representing carbon stock changes and greenhouse gas emissions and removals and the relations between these and land use and land-use changes.
- Consistent – capable of representing management and land-use change consistently over time, without being unduly affected either by artificial discontinuities in time series data or by effects due to interference of sampling data with rotational or cyclic patterns of land use.
- Complete – all land should be included, with increases in some areas balanced by decreases in others where this occurs in reality.
- Transparent – data sources, definitions, methodologies and assumptions should be clearly documented and available for external peer review.

Ground-Based Carbon Inventory Methods

Carbon stock estimation requires knowledge of the size of the area that is being assessed, and the average carbon stock (t/ha) for that area. Area is normally determined from maps, aerial photos or satellite images. Average carbon stocks are typically determined from plot-based measurements.

Sample Plots

Sample plots should be established throughout the area being assessed on an objective (usually random or systematic) basis. Where change is to be assessed by repeat measurement, permanent plots are the preferred option because they factor out spatial variability that would otherwise mask temporal changes. They also allow for verification of field measurements, something that is difficult when plots are not relocatable.

The number of plots required depends on the desired level of precision, with higher levels requiring more resource and therefore cost. Costs will also increase where:

- Carbon stocks are more variable
- More carbon pools are measured
- The frequency of monitoring increases, and
- The monitoring methods become more complex

Stratification is a means of reducing the variability of carbon stocks within individual sampling units or strata. It should only be used where it reduces the number of plots required to achieve the desired level of precision.

Plot size should be sufficient to capture the variability at the site, but not so large as to require more effort (and therefore cost) to measure than is necessary. This is usually achieved using nested quadrates, with large trees being measured over the whole plot, smaller trees over part of the plot area, and understorey vegetation over a still smaller area.

Plots should be either circular or square. Circular plots minimise what is termed the edge effect (i.e. minimise the boundary for a given area)), but the inability to lay out boundary tapes can cause difficulties for understorey measurement. Square plots overcome this problem. Circular plots are a good option when only trees are being measured.

Measuring Carbon Stocks

Plant biomass is approximately 50% carbon. Five pools are recognised for carbon accounting purposes. These are above-ground live (trees, shrubs, understorey vegetation), below ground (roots), dead wood (logs), litter (small branches, twigs, fallen leaves, ferment and humus), and soil organic matter. Change is usually greatest in the above-ground live pool, although soil carbon stocks can show substantial changes where there has been a land-use change.

Carbon stocks in trees (above-ground live) are estimated from diameter and height measurements. These are converted to biomass (and therefore carbon) estimates using allometric relationships, which incorporate a species-specific density term. In forests, large trees sequester the bulk of the carbon stock. Shrub and understorey vegetation is assessed from height and cover measurements, with the resulting volume converted to a mass

Roots (below-ground) are typically estimated as a percentage of the above-ground live pool, with figures obtained from experimental studies.

Dead wood (also termed Coarse Woody Debris) is estimated from length and diameter measurements. These are used to derive a volume that is converted to a mass using a species-specific density factor and a decay-stage modifier. The latter discounts the carbon remaining in the log, based on the stage of decay.

Litter is sampled using quadrat harvests. Where litter volumes are high or remote locations create handling difficulties, sub-sampling can be used to reduce the need to transport and process large quantities of leaf and twig material.

Soil carbon is assessed by determining the carbon content of a known volume of soil. Samples are collected for bulk density assessment and for carbon analysis. Soil carbon cannot be assumed to be a set percentage of the dry mass.

Carbon Stock Estimates

Carbon stock estimates are calculated on a plot-by-plot basis, expressed as tonnes/ha or tonnes CO₂e/ha, and slope corrected. The latter procedure ensures that all results are expressed on a horizontal area basis (i.e. the same basis as the mapped area). The average carbon stock for all plots multiplied by the area is the carbon stock for the sample area.

Carbon stock change (i.e. the amount of carbon sequestered) is typically assessed by re-measuring plots, and calculating the difference between the initial and final stock estimates.

Sources Of Error In Carbon Stock Estimates

There are three main sources of error associated with carbon stock estimates:

- Sampling error – the number and selection of plots used to sample the area of interest.
- Measurement error – errors associated with field measurements (e.g. stem diameters and heights), or laboratory analyses (e.g., soil carbon analysis).
- Regression error – errors associated with the allometric equations used to convert the field measurements to biomass (and therefore carbon).

Each of these sources of error can be quantified.

Quality Assurance And Quality Control

Quality control (QC) refers to the set of procedures you put in place to ensure a robust inventory. Quality assurance (QA) is the system a third party uses to ensure the delivery of a quality result.

All inventory programmes should have a QA/QC plan. This should cover:

- Collecting reliable field measurements
- Verifying the methods used to collect field data
- Laboratory measurements
- Data entry and archiving
- Analysis procedures

This is usually best achieved by developing a set of Standard Operating Procedures (SOPs), which set out how each task is to be done, the standards that are expected, and the checks that will be done to ensure those standards are met.

2.1.5 Important Background Documents

The following set of documents (listed 1-6 below) provide useful material for the capacity development and evolving the national and regional strategy:

1. UNFCCC/SBSTA Report on the informal meeting of experts on enhancing coordination of capacity-building activities in relation to using the Intergovernmental Panel on Climate Change guidance and guidelines as a basis for estimating forest-related greenhouse gas emissions and removals, forest carbon stocks and forest area changes, Bonn, Germany, 25–26 May 2010
2. IPCC 2010, IPCC Expert Meeting on National Forest GHG Inventories eds: Eggleston H.S., Srivastava N., Tanabe K., Baasansuren J., National Forest GHG Inventories – a Stock Taking, Pub. IGES, Japan 2010 IPCC Task Force on National Greenhouse Gas Inventories (TFI).
3. GOFC-GOLD REDD technical sourcebook, updated version published in November 2009.
4. UNFCCC AWG LCA negotiation text from SBSTA 32 (June 2010) and Tianjin, 4–9 October 2010 – for the latter one please refer to the LCA text: pages 22-23, 52-59 for REDDplus.
5. Herold, M. & M. Skutch (2009). Measurement, reporting and verification for REDD+: objectives, capacities and institutions, National REDD Architecture and Policies, CIFOR book,
http://www.cifor.cgiar.org/Knowledge/Publications/DocumentDownloader?a=d&p=%5Cpublications%5Cpdf_files%5CBooks%5CBAngelsen0902.pdf
6. The IPCC Good Practice Guidelines are of vital importance and can be accessed through the web:
 - a. Guidelines (2003) on Land Use Land Use Change and Forestry (LULUCF), focus on chapters 2 and 3: <http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html>
 - b. Guidance on Agriculture Forestry and other Land Uses (AFOLU), focus on chapters 1-4: <http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html>

2.2 FIJI PROGRESS ON REDD+

2.2.1 German Technical Cooperation

Fiji began its REDD+ readiness process in 2009 with support from the BMZ (German Federal Ministry for Economic Cooperation and Development), which funded the SPC/GTZ Regional

Programme on 'Adaptation to Climate Change in the Pacific Island Region' (ACCPIR). The ACCPIR in Fiji involves policy and technical developments in REDD+ and encompasses a forest sector climate change adaptation programme that links adaptation outcomes (resilience) with climate change mitigation finance in REDD+.

2.2.2 ACCPIR Inception Workshop

The inception workshop for the Fiji component of the ACCPIR identified a strategic framework for a national REDD+ programme that involves a phased approach that is aligned with international REDD+ development processes defined by the World Bank Forest Carbon Partnership Facility (FCPF) and the UNREDD. The three phases are:

- Phase 1: Policy and scoping – output “National REDD Policy”
- Phase 2: Detailed planning – output “National REDD Strategic Action Plan”
- Phase 3: Implementation – output “National REDD strategy outcomes and monitoring”

The technical stream focuses on the development of a national forest carbon monitoring, reporting and verification (MRV) system, with the policy stream focusing on strategy, financing and implementation.

2.2.3 ACCPIR National REDD+ Policy and Scoping Consultation

A National REDD+ Policy and Scoping Consultation Workshop was held in September 2009. The purpose of the workshop was to build capacity through policy and technical training, and then undertake an informed multistakeholder consultation process to build the policy and technical framework for a National REDD+ Strategy (Weaver et al 2009).

This consultation involved:

1. Policy and technical training.
2. Policy consultations with key stakeholders at a national level.
3. Technical input to policy dialogue.
4. Data and capability assessment for a national forest carbon monitoring programme for Fiji, and the design of a strategy and methodology to fill data and capability gaps.
5. Refinement of a draft National REDD Policy.

Policy and technical consultations resulted in the refinement of a National REDD Strategy Framework, which elaborates the following:

- Scale (national, project or combination)
- Scope (activity types and priorities)

- MRV (how emissions/carbon stocks are measured and the development of a national reference level for future negotiations at the UNFCCC)
- Financing (target sources of funding for a National REDD Programme)
- Distribution (how benefits arising from REDD activities will be distributed)
- Governance
- Capacity Development
- International Policy Engagement

The multistakeholder consultation process culminated in a line-by-line negotiation and refinement of a draft text for a National REDD+ Policy.

The mandate generated by this workshop led to progress in the policy and technical components of the national REDD+ programme with the following outcomes to December 2010:

- The National REDD+ Policy draft went through the government consultation process during 2010 and was officially adopted by Cabinet in December 2010
- The first phase of a national forest area change assessment
- Establishment of 100 Permanent Sample Plots throughout Fiji & data entry into MS Access database (AAC-Carbon Stock)
- National Forest Inventory mapping and volume calculations
- Forest Certification (National Standard)
- Review of Forest Legislation
- 1 million tree planting initiative

Figure 6. Permanent Sample Plot Locations, Viti Levu.

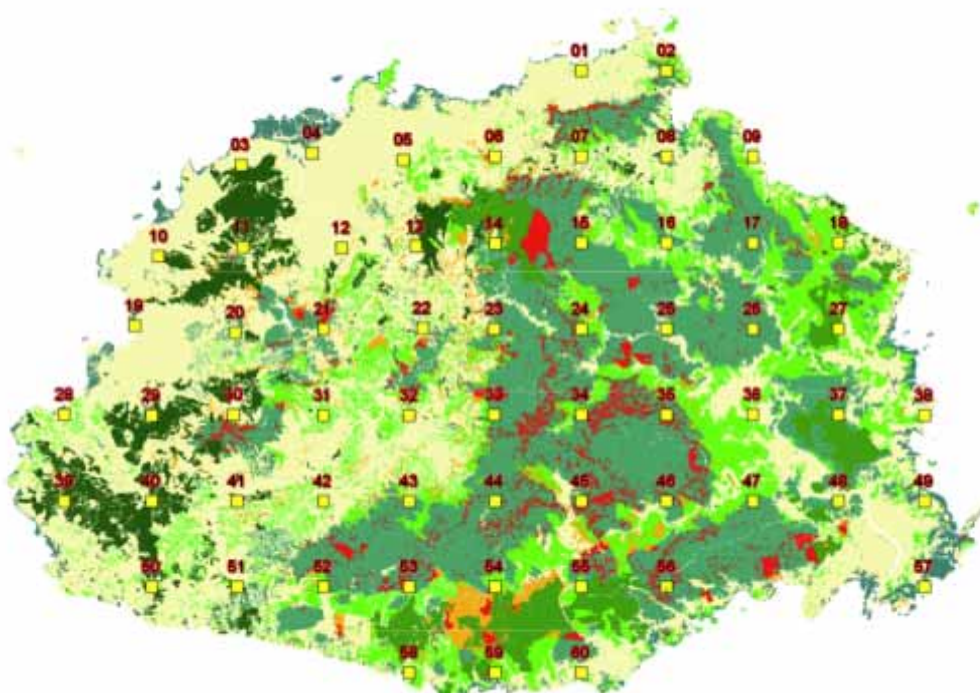


Figure 7. Permanent Sample Plot Locations, Vanua Levu.

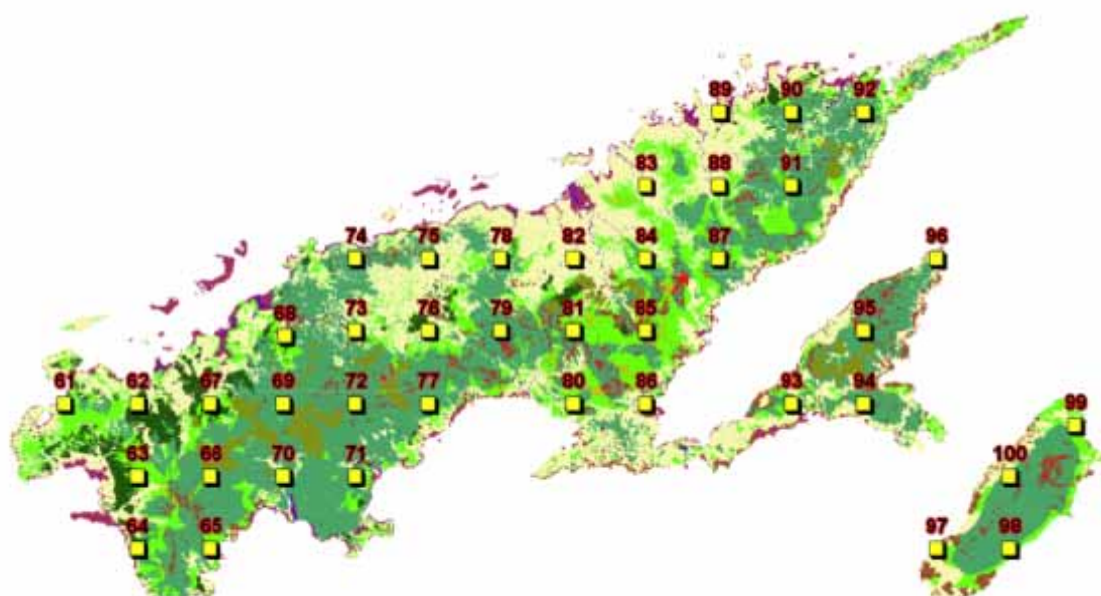
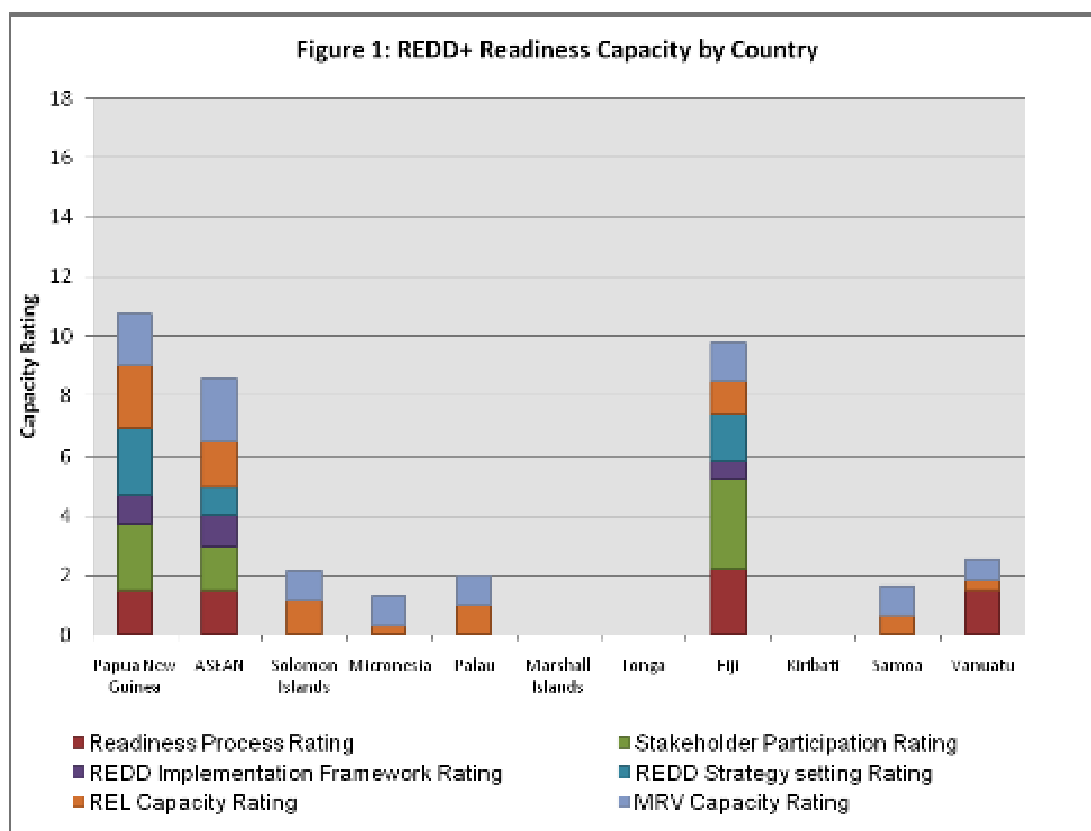


Figure 8: REDD+ Readiness Capacity by Country. Source: Initial National Programme Document for the Solomon Islands UN-REDD Programme (2010).



2.3 REDD+ AND THE CONVENTION ON BIOLOGICAL DIVERSITY

Fiji's position¹⁶ on REDD+ recognises:

- Current policy formulation process that Fiji is undertaking
- The need for REDD+ to support existing initiatives under the National Biodiversity Strategic Action Plan (NBSAP)
- The need for better coordination at the national level in the development of national implementation framework
- The need for benefits to be distributed fairly to all parties involved in REDD
- The need for information sharing and communication strategy on REDD for better understanding of benefits and potential risks to biodiversity use and management
- The need for community involvement at all levels of consultation

At the international scale the tenth Conference of Parties (COP 10) to the Convention on Biological Diversity took place in Nagoya, Japan in October 2010. The decisions arising from COP-10 included 5 strategic Goals and 20 Targets¹⁷, some of which are relevant to REDD+ activities and policies. The Strategic Goals and Targets of relevance to REDD+ are:

“Strategic Goal B. Reduce the direct pressures on biodiversity and promote sustainable use

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Strategic Goal C. To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Strategic goal D: Enhance the benefits to all from biodiversity and ecosystem services.

Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being,

¹⁶ Presentation made by Eleni Tokaduadua of the Fiji Department of Environment to the Fiji REDD+ Strategy Workshop, November 2010 (Tokaduadua 2010). Available here:

http://www.spc.int/lrd/index.php?option=com_docman&task=cat_view&gid=211&Itemid=48

¹⁷ CBD COP10 Decision X/2. Available here: <http://www.cbd.int/decision/cop/?id=12268>

are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.”

CBD COP 10 Decision X/31 on Protected Areas¹⁸ elaborated a number of themes relevant to REDD+. Of the ten “Issues that need further attention” climate change was number 2 where the CBD¹⁹:

14. Invites Parties to:

- d. **Identify areas that are important for both biodiversity conservation and for climate change mitigation and/or adaptation**, including carbon sequestration and maintenance of carbon stocks, and where appropriate protect, restore and effectively manage and/or include them in the protected areas systems ...
- e. Support and **finance** the conservation and management of naturally functioning ecosystems and in particular, **protected area systems in contributing to carbon sequestration and maintenance of carbon stocks as well as to ecosystem-based approaches to adaptation to climate change ...**;
- f. Further **develop tools ... for the planning of protected-area networks and climate-change mitigation and adaptation measures, that combine ... biodiversity, natural carbon storage and other ecosystem services** and as appropriate, vulnerability assessments for terrestrial as well as marine and coastal protected areas;

15. *Invites* Parties to explore how **funding opportunities under climate change adaptation and mitigation strategies could contribute to the implementation of the programme of work on protected areas**, while enhancing co-benefits for biodiversity and climate change adaptation and mitigation;

16. *Reminds* the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to **pay attention to the impact on and the role of protected areas in adaptation and mitigation strategies ...**

17. *Invites* the Conference of the Parties to the United Nations Framework Convention on Climate Change to consider **ecosystem-based approaches to adaptation** and in particular on the role of protected areas as an effective mechanism/tool to build the resilience of vulnerable communities and ecosystems;

¹⁸ CBD COP 10 Decision X/31 (2010) available here: <http://www.cbd.int/decision/cop/?id=12297>

¹⁹ The following numbered passages in smaller font (Calibri 11pt) are taken directly from the CBD COP 10 Decision text, abridged (for brevity) and with my emphasis. The full text is available here: <http://www.cbd.int/decision/cop/?id=12299>

Another decision arising from the CBD COP 10 related to ‘Biodiversity and Climate Change’ (Decision X/33²⁰) and has considerable relevance to REDD+:

Ecosystem-Based Approaches For Mitigation

- n. Implement ecosystem management activities, ... as a contribution towards achieving and consistent with, the objectives of the **United Nations Framework Convention on Climate Change** ...;
- o. In forest landscapes subject to harvesting, clearing and/or degradation, implement ... improved land management, reforestation and forest restoration **prioritizing the use of native communities of species, to improve biodiversity conservation and associated services while sequestering carbon and limiting the degradation and clearing of native primary and secondary forests**;
- p. When designing, implementing and monitoring afforestation, reforestation and forest restoration activities for climate change mitigation consider conservation of biodiversity and ecosystem services through, for example:
 - a. Converting only land of low biodiversity value or ecosystems largely composed of non-native species, and preferably degraded ones;
 - b. Prioritizing, whenever feasible, local and acclimated native tree species when selecting species for planting;
 - c. Avoiding invasive alien species;
 - d. Preventing net reduction of carbon stocks in all organic carbon pools;
 - e. Strategically locating afforestation activities within the landscape to enhance connectivity and increase the provision of ecosystem services within forest areas;
- q. Enhance the benefits for, and avoid negative impacts on, biodiversity from [REDD+], ... taking into account the need to ensure the **full and effective participation of indigenous and local communities in relevant policy-making and implementation processes**, ... and to consider land ownership and land tenure, in accordance with national legislation;”

...

Valuation And Incentive Measures

9. Requests the Executive Secretary to:

- b. Collaborate with relevant international organizations to collect scientific knowledge and case studies and identify knowledge gaps on the links between biodiversity conservation and sustainable use and organic **carbon stock conservation and restoration**, and make the results available to Parties through the clearing house mechanism;
- c. Collaborate with relevant international organizations to expand and refine analyses **identifying areas of high potential for the conservation and restoration of carbon stocks** ...;
- ...
- e. Support, as appropriate, Parties and relevant organizations and processes to **design and implement ecosystem-based approaches for mitigation** and adaptation as they relate to biodiversity;

²⁰ CBD COP 10 Decision X/33 (2010) available here: <http://www.cbd.int/decision/cop/?id=12299>

- f. **Convene ... an expert workshop ... on [REDD+]**, with a view to enhancing the coordination of capacity-building efforts on issues related to biodiversity and ecosystem-based carbon sequestration and the conservation of forest carbon stocks;
- g. With regard to **[REDD+] ... provide advice ... on the application of relevant safeguards for biodiversity ...**;
- h. ... identify possible indicators to **assess the contribution of [REDD+] to achieving the objectives of the Convention on Biological Diversity**, and assess potential mechanisms to monitor impacts on biodiversity from these and other ecosystem-based approaches for climate change mitigation measures ...

CBD COP 10 Decision X/36 on Forest Biodiversity²¹ focused on the following key areas:

- Targeted joint activities between the secretariats of the Convention on Biological Diversity and the United Nations Forum on Forests (UNFF)
- Cooperation with the Food and Agriculture Organization of the United Nations and relevant organizations
- Cooperation with Collaborative Partnership on Forests

In September 2010 the UNEP and CBD also held a ‘Global Expert Workshop on Biodiversity Benefits of Reducing Emissions from Deforestation and Forest Degradation in Developing Countries’. Key findings of this workshop²² included the results arising from three breakout group sessions. The topics covered were:

Topic 1: Biodiversity safeguards: identifying main risks associated with REDD-plus, and developing recommendations setting out how these risks can be avoided or mitigated.

Topic 2: Optimizing multiple benefits: identifying main opportunities for synergies between the implementation of REDD-plus and the CBD programme of work on forest biodiversity; identifying the tools and processes needed to achieve and optimize these synergies; and identifying how these tools and processes could be improved.

Topic 3: Indigenous and local community benefits: identifying risks to indigenous and local communities, and developing recommendations how these risks can be avoided or mitigated; identifying the main opportunities for achieving benefits from REDD-plus for indigenous and local communities, and developing recommendations how these benefits can be maximized. Under this point, participants are asked to consider specifically articles 8(j) and 10 (c) of the Convention on Biological Diversity.

The full text of recommendations arising from this workshop is provided in Appendix 6.

²¹ CBD COP 10 Decision X/36 (2010) available here: <http://www.cbd.int/decision/cop/?id=12302>

²² UNEP/CBD Global Expert Workshop on Biodiversity Benefits of Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, September 2010. Available here: <http://www.cbd.int/doc/?meeting=EWREDD-01>

The key conclusion of the CBD Global Expert Group Workshop on REDD+²³ states that:

- “If REDD-plus is successful, it will have significant and unprecedented benefits for biodiversity. CBD constituency should support the efforts of UNFCCC to reach agreement on a well-designed mechanism.
- Both protection of biodiversity and the full and effective participation of indigenous peoples and local communities are necessary for the success of REDD-plus.
- Safeguards, if designed and implemented appropriately, will reduce possible risks and enhance the potential benefits of REDD-plus.
- There is a need to monitor co-benefits of REDD.”

²³ Summarised in the Co-Chairs Summary. Available here: <http://www.cbd.int/doc/?meeting=EWREDD-01>; and presented at a UNFCCC COP 16 side event in on 30 November 2010 in Cancun (Christophersen 2010), available here: <http://www.cbd.int/cooperation/pavilion/cancun-presentations/2010-11-30-Christophersen-en.pdf>

Part 3 – Workshop Outputs

This section elaborates on the results of strategic discussions during multistakeholder breakout group sessions undertaken at the Fiji REDD+ Strategy Workshop held in Suva on November 25-26, 2010.

The breakout group sessions are depicted in Table 3:

Table 3. Breakout group sessions for the Fiji REDD+ Strategy Workshop

Topic	Description
Financing	Clarify financing priorities, strategies, and work streams (grant, market, barter, bilateral, and domestic instruments)
Scope	Determine how different activity types identified in the Draft National REDD+ Policy will be implemented, supported and monitored in the National REDD+ Programme.
Scale	Determine structure of national and sub-national components of hybrid scale national REDD Programme
Distribution	Develop detailed strategy for benefit distribution component of national REDD+ Programme <ul style="list-style-type: none"> ○ Addressing drivers of forest carbon loss ○ Maximising benefits to landowners ○ Maximising strategic benefits to Fiji ○ Linkages between REDD and A/R
National Forest Area Change Assessment	Discuss the current status and progress for the historical forest area change assessment
National Forest Carbon Monitoring	Develop a plan of activities for the next year to continue REDD monitoring readiness process (remote sensing) and capacity development, including consideration of links with international partners (i.e. EU project). <ul style="list-style-type: none"> ○ Remote Sensing ○ Forest Inventory ○ Forest carbon data management
National Forest Carbon Stock and Stock Change Calculation	Determine Project Plan for implementation of outstanding tasks
National Forest Carbon Inventory	Designing a future national forest carbon inventory methodology by adapting the current national forest inventory
Governance 1: National Level Governance	Clarify governance structure for National REDD+ Programme

Governance 2: Legal Clarification	<ul style="list-style-type: none"> ○ Carbon property rights and transfer rules ○ Government (licences, taxation) ○ NLTB (lease and levies) ○ Structure and role of Designated National Authority (DNA)
Governance 3: Sub-national governance	<ul style="list-style-type: none"> ○ Transparent counter-party to grant or market finance providers ○ Linkage to national level programme governance
Pilot Project	Project Components for project scale option <ul style="list-style-type: none"> ○ Finance Instrument ○ Project cycle ○ Activity type ○ Methodology ○ Project site/s ○ PDD ○ Path to market
International Policy Engagement	Present and discuss process for FAO FRA 2010, in particular the remote sensing survey, and: <ul style="list-style-type: none"> ○ Global Institutions (UNFCCC, IPCC, FAO, CBD, World Bank, Asian Development Bank) ○ Multilateral (Regional) ○ Bilateral
Education, Training & Research	<ul style="list-style-type: none"> ○ MRV Education ○ MRV Technical Training ○ MRV Research

In the following pages the results from these breakout groups is presented in the form of tables summarizing the outcome of those discussions.

3.1 FINANCING

The purpose of this breakout group session was to clarify financing priorities and strategies for national REDD+ readiness and implementation.

Key themes arising from the discussions were:

- The need for focus on areas capable of delivering the highest returns for minimum effort
- Key common denominators irrespective of funding source of funding instrument (e.g. common MRV standards)
- An openness to consider all financing options but with an awareness of the issues with different options and the need for appropriate safeguards for each
- The need for pilot projects to test one or other financing option

- The need to consider the scale of REDD+ activities and how this relates to financing criteria and opportunities
- The need to take into consideration the economies of scale and associated transaction costs of some activity types and financing options
- The need to consider the benefits of rolling out government-led programmes based on particular activity types and linked to particular financing arrangements
- The need to consider the option of allowing devolved landowner-led activities and financing
- The value associated with harness the initiative and energy of the private sector and landowners, but where guidance and safeguards are needed to steer the private sector in a direction that generates maximum benefits to landowners and minimises external costs (e.g. to biodiversity)
- The need to consider the provision of technical assistance to private sector and landowner-based project developers to facilitate high quality participation

Further notes from this breakout group:

- Concentrate more on barriers to enter markets
- Economies of scale (e.g. bundling with other services or other locations)
- Develop a product which can be sold easily
- Priority areas for protection already identified by DoE (not yet legally protected areas with high conservation and carbon value), could be priorities for REDD, connected to national land use plan (also recommended by CBD)
- Identify the “low-hanging fruit” E.g. afforestation/reforestation of unused/degraded land
- Developing a priority matrix for project and activity types
- Developing a “REDD+ Country PIN” for whole of Fiji
- How can communities who are doing SFM already be included?
- Fiji’s carbon as one product, engagement with potential buyers (also other countries) to shape the product accordingly
- Long term perspective important, also from the buyers (e.g. changing laws and policies in donor countries, priorities of multilateral organisations)
- UNFF workshop with ACP countries next year on the question which internal, domestic resources are available for SFM
- No regret options, REDD as part of a bundle of activities
- The need to consider a larger scale direct barter financing option for a national REDD+ Programme.

Task 1 – Financing: Strategic Financing Plan for National REDD+ Implementation

Develop a 'Strategic Financing Plan for National REDD+ Implementation' for the national REDD+ Programme that takes into consideration the themes identified in the 'Financing' breakout group at the National REDD+ Strategy Workshop in November 2010 and documented in this report. This Plan will clarify the national approach to REDD+ implementation financing in terms of:

- Defining the specific design and configuration of the 'hybrid' model of REDD+ implementation financing payments (national, programmatic, and project scale activities) as specified in the National REDD+ Policy.
- Defining a means of maximising the potential direct and indirect benefits to Fiji and indigenous landowners arising from REDD+ activities.
- Use Strategic Financing Plan for National REDD+ Implementation to inform the scale element of pilot activities.

The 'Strategic Financing Plan for National REDD+ Implementation' to be incorporated into the National REDD+ Guidelines (cf. Task 19).

Task 2 – Financing: REDD+ Country PIN

Prepare a REDD+ Country PIN (Programme Idea Note) to generate an estimate of the overall potential value of the National REDD+ Programme to the national economy in terms of potential financial inflows from capacity building and implementation activities. This REDD+ Country PIN will also identify the national scale co-benefit potential arising from the National REDD+ Programme (including social, economic, biological diversity, climate change adaptation, water security, and food security co-benefits).

3.2 SCOPE

The purpose of this session was to determine how different activity types identified in the Draft National REDD+ Policy would be implemented, supported and monitored in the National REDD+ Programme. This involved revisiting the key activities causing and driving forest carbon change in Fiji, discussion of their importance leading to potential implementation activity types including variants of:

- Afforestation/reforestation
- REDD (reduce deforestation)
- Reducing degradation
- Sustainable management of forests and
- Forest conservation

This discussion was informed by the 'Fiji REDD Policy and Scoping Consultation Report' (see Appendix 9b on page 126 – Weaver et al 2009), which identified priorities, including impact

and ease. Of particular importance was to identify ways to link activity types with the monitoring of those activity types.

Potential activities should be scoped, sectorally and spatially and key stakeholders to be involved, more specifically:

- Stakeholders and implementing agencies
- Structure and potential of the activities
- Whether left merely to private sector/landowners to drive the process
- Whether incentives or rules will be provided to foster uptake
- Whether activities will be driven and/or managed by the Department of Forestry (DoF) and if so how etc,
- Whether there are existing programmes (e.g. SFM trials) that could be incorporated,
- Priorities for demonstration activities – select the three most relevant ones (feeding into the pilot project breakout group).
- Education, training, and research requirements (feed into breakout group B7c)
- Safeguards and interim performance issues for key identified activities

The focus of this breakout group was to identify ways to link activity types with the monitoring of those activity types. Such an assessment is a response to the recent UNFCCC text requesting developing country parties:

1. To identify drivers of deforestation and forest degradation
2. To identify activities within the country that result in reduced emissions

The table below describes the output of the discussions as an update and expansion of Appendix 9b on page 126 of the Fiji REDD Policy and Scoping Report (2009):

Table 4. Drivers of Forest Carbon Change

Drivers of Forest Carbon Change			
Processes that affect forest carbon stocks	REDD Response to Drivers		
	REDD Options (activity types)	Priority /Ease	Define issues and activities
Forest conversion for expansion of agriculture	Reducing/Avoiding deforestation, forest conservation / enhanced agricultural efficiency	Very high /Med	<ul style="list-style-type: none"> ○ Competition with other land uses ○ New policy supporting agricultural production
Conversion of forest for settlement (squatters)/ tourism – especially in mangroves and including illegal settlements	Potential carbon penalty and/or domestic offset	High /Low	<ul style="list-style-type: none"> ○ Competition with tourism (expand infrastructure)

Drivers of Forest Carbon Change			
Processes that affect forest carbon stocks	REDD Response to Drivers		
	REDD Options (activity types)	Priority /Ease	Define issues and activities
Plantation clear-fell harvesting & replanting	A/R Expansion & SFM	High /High	<ul style="list-style-type: none"> ○ Important (high priority) ○ Should be linked to plantation management (carbon sustainable management of plantation) ○ Not clearing native forest anymore for plantation establishment ○ Requires engagement of private sector
High intensity (selective) logging of native forests à remains native	Avoided degradation via SFM or forest protection	Medium /Med	<ul style="list-style-type: none"> ○ Implementation of national code of logging ○ New forest decree (SFM)
(Accidental) burning that gets out of control & into forest	Fire control program	Medium /Low	<ul style="list-style-type: none"> ○ Fire Monitoring program linked to new forest decree
Forest clear-fell for mining prospects	Mandatory Site Rehabilitation – potential carbon penalty/ offset	Medium /Low	<ul style="list-style-type: none"> ○ Environmental Management Act (EMA) requires rehabilitation and environmental assessment
Protecting native forest for ecosystem services, etc. e.g. Sovi Basin	Avoided deforestation / forest conservation degradation linked to sink program	Medium /Med	<ul style="list-style-type: none"> ○ Establishment of protected areas in all provinces could be enhanced using REDD+
Shifting cultivation – slash & burn – especially in dry areas	Timber cash crops, agricultural efficiency	Some /Low	<ul style="list-style-type: none"> ○ Precursor to conversion to permanent agriculture
Afforestation of talasiga land pine forest for wood/chip production	A/R program Sink program	Some /High	<ul style="list-style-type: none"> ○ Afforestation of non-forest land has high priority ○ Already ongoing (linked to the establishment of new plantations)
Afforestation with teak	Carbon project/ program	Some /High	<ul style="list-style-type: none"> ○ Afforestation of non-forest land has high priority (linked to the establishment of new plantations)
Natural regeneration of expired agriculturally leased land	A/R carbon program	Some /Med	<ul style="list-style-type: none"> ○ Large areas currently being reconverted to agriculture (conversion of secondary regrowth)

Drivers of Forest Carbon Change			
Processes that affect forest carbon stocks	REDD Response to Drivers		
	REDD Options (activity types)	Priority /Ease	Define issues and activities
Increased vulnerability to cyclone damage/ fires/landslides etc. of degraded natural wet forest	None	Some /Low	<ul style="list-style-type: none"> Low priority

Based on the assessment above, 3 priority area activities are proposed:

Avoiding Deforestation:

- High priority but also low level of ease
- Issues:
 - Land use policy and land use and urban planning issues
 - Country priority is on food production (economy is driver)
 - Need for coordination and in cooperation of forest carbon issues in land use planning and land allocation
 - National compensation scheme for carbon swapping/compensation
 - Link to protected areas
- Leading agency: Dep. Land Resources, Planning and Development with Forestry
- Stakeholders: Forestry, Agriculture, Land Owners, Town and Country Planning, NLTB, IAB, DOE

Improved Forest Management:

- Medium priority and medium level of ease
- Issues:
 - Sustainable management of plantations
 - Sustainable logging practices in natural forest
 - Link to protected areas
- Leading agency: Forestry department
- Stakeholders: NLTB, land owners, DOE, private sector (Fiji Hardwood, Fiji Pine Ltd., Sawmillers Association, Logging contractors)

Afforestation/Reforestation:

- High priority and high level of ease
- Issues:
 - Afforestation degraded/non-forest land (i.e. of talasiga land)
- Leading agency: Forestry department
- Stakeholders: Land Owners, NLTB, IAB, LRPD, Private Sector (Future Forest Fiji)

Task 3 – Scope: REDD+ Activity Matrix

Use the information presented here from this breakout group discussion to inform the design and development of a REDD+ Activity Matrix. The REDD+ Activity Matrix will be used as tool for strategic decisions relating to REDD+ implementation. The REDD+ Activity Matrix will prioritise REDD+ activity types in relation to carbon benefits, ease of implementation, co-benefits, and safeguards. The REDD+ Activity Matrix to be incorporated into the National REDD+ Guidelines (cf. Task 19).

3.3 SCALE

The purpose of this discussion was to determine the structure of national and sub-national components of the ‘Hybrid’ scale national REDD+ Programme – as informed by the Fiji REDD Policy and Scoping Consultation Report and the draft Fiji REDD+ Policy (Appendix 5 on Pg 114 – Weaver et al 2009).

The ‘Hybrid’ scale national programme identified in the Fiji REDD Policy and Scoping Consultation Report allows for different activity scales including national, programmatic, and project scale activities. The breakout group saw advantages with national, programmatic, and project scale activities whereby different project types would be potentially suitable to different scales of activity. International policy developments in REDD+ may end up prescribing the scale at which UNFCCC REDD+ activities are able to occur in developing countries. For example, the UNFCCC REDD+ instrument may end up being a national scale instrument, thereby precluding programmatic and project scale activities. Even if this were to be the case (i.e. national scale forest carbon accounting, and national scale incentive payments) the actual management of forest carbon needs to happen at a smaller scale through projects and programmes. Only, the latter situation would mean that benefit distribution (particularly incentive payments) would require a national financial distribution mechanism to devolve incentive payments to landowners in some way.

3.3.1 National Scale

National scale carbon management would involve national scale forest carbon accounting and national scale incentive payments. For example, Fiji would determine its national carbon stocks under its national Reference Emissions Level (REL) and then subsequently measure its national forest carbon stock and stock change (at a time frame determined by the international instrument) and win carbon incentive payments on the basis of a positive change in carbon stocks through time. This is similar to the way in which developed countries in the Kyoto Protocol report on their national forest carbon balance under the Kyoto Protocol.

3.3.2 Programmatic Scale

A programmatic scale of activities would involve an aggregation of activities in a programme that followed a particular activity type and carbon accounting methodology. Such a programme could be managed by a national entity such as the Department of Forests, Fiji Pine, Fiji Hardwood Corporation, or an entity representing a large group of landowners (e.g. private sector entity or NLTB).

Example 1: Fiji Pine changing the management status of non-productive lands into some form of carbon production. This might involve changing land use in all areas of existing and potential indigenous regeneration to permanent protection and generate carbon revenues. This would require the application of an afforestation/reforestation (A/R) methodology and could be adapted from the New Zealand Permanent Forest Sink Initiative (PFSI) methodology (a Kyoto compliance methodology type).

Example 2: Fiji Pine and/or Fiji Hardwood Corporation increasing rotation age for their plantation forest estate and generate carbon revenues under the Improved Forest Management activity type under the Voluntary Carbon Standard (or equivalent).

Example 3: A scheme supporting the conversion of grasslands or non-productive farmland to new plantation forests under an Afforestation/Reforestation activity type.

Example 4: Prescriptive Improved Forest Management (IFM) carbon credit scheme for indigenous forest owners shifting from timber harvesting to forest protection (logged to protected forest). This could use the IFM LtPF (Logged to Protected Forest) methodology developed by Weaver (2010)²⁴, which uses the methodological guidance of the Voluntary Carbon Standard, but adapts it to lower project development and transaction costs.

Example 5: Prescriptive Improved Forest Management (IFM) carbon credit scheme for indigenous forest owners shifting from high intensity logging to SFM (FSC certification for the timbers extracted from such a scheme). This could be adapted from the IFM LtPF methodology described above.

Example 6: Prescriptive REDD scheme for indigenous forest owners intending to change land use to agriculture.

Example 7: Prescriptive agroforestry scheme for agricultural landowners to establish agroforestry plantations on suitable agricultural lands. This would involve using an existing afforestation/reforestation methodology, or the development of a new methodology specifically catered to local circumstances.

Participation criteria for each a particular scheme could include clear and transparent:

- Tenure arrangements and carbon rights
- Evidence-based carbon benefits (prescribed MRV)

²⁴ See Appendix 7 for a description of the project that developed this methodology (Weaver and Hewitt 2010).

- Evidence-based benefit distribution programme
- Non-permanence risk management (nationally aggregated buffer)
- Prescribed monitoring regime
- Prescribed and evidence-based ancillary benefit claims
- Linkages of activity data into national forest carbon data management system.

All schemes could potentially be managed by a single entity that aggregates carbon management and carbon finance expertise and is financed by levies on participants. This single entity could be a government agency (e.g. an executive branch of the National REDD Steering Committee), a private company or not-for-profit agency established with the purpose of maximizing carbon benefits to landowners. This entity could also provide detailed carbon management advice to the Department of Forests, Fiji Pine and Fiji Hardwood Corporation, and landowners including helping to design and manage their carbon programmes.

3.3.3 Project Scale

This could involve decentralized opportunities for individual landowners or landowner groups to undertake their preferred carbon projects, but in a manner that meets certain national quality assurance and data management requirements. Such requirements could include incorporating project-based data into the national forest carbon data management system, and gaining approval from the Department of Forests (DOF) and the DNA. The value of project scale activities is that they provide an opportunity to harness the energy and innovation of the private sector carbon industry. It is important however, that the energy and innovation of the private sector carbon industry is steered in a direction that provides adequate safeguards. In this way, national REDD+ regulations need to provide sufficient quality assurance requirements to ensure high quality projects, but not so much regulation that it stifles private sector participation. Working effectively with the private sector can free up government resources to enable REDD+ implementation to take place more rapidly than if dependent on sometimes slow moving government processes.

3.3.4 General Comment

It is worth noting that Fiji is a small island state, and the scale of the entire forest resource is comparable to project scale activities in larger countries. For this reason, a national scale or programmatic scale approach to REDD+ implementation could involve the aggregation of a relatively large proportion of the Fiji forest estate eligible for REDD+ benefits into single initiatives and transacted (in terms of incentive payments) with single counter-parties. For example, the carbon volumes coming out of Fiji would be relatively small in comparison to the availability of international funds for REDD+ implementation (including carbon credit demand). This dynamic could work to the advantage of Fiji if it chose to pursue an ambitious REDD+ implementation strategy that aimed to generate the maximum benefits from REDD+ in the shortest time frame, in order to realign the forest sector into a new era of incentivised climate-friendly development.

Another way of approaching the scale of REDD+ implementation is to bundle the national effort into a single ‘transaction’ with a large-scale counter-party (e.g. a bilateral partner or large corporate entity such as a big northern hemisphere international airline) in the form of a ‘Direct Barter’ transaction. Such a transaction could involve a significant performance-based incentive package (including cash and other significant non-cash values such as a trade deal), which enables the permanent realignment of the Fiji forest sector in exchange for significant development benefits to the nation. This would need to be accompanied by a robust domestic benefit distribution regime to ensure that the benefits of such a realignment of the forest sector adequately compensated landowners.

Furthermore, the ambitious realignment of the forest sector in the direction of REDD+ would include significant value-added forest production (for example, in the form of FSC and climate-friendly certified timber, as well as direct and indirect tourism benefits). A Direct Barter package could include finance to support timber certification capacity building and implementation processes, capacity building in REDD+, and an aggregation of performance-based REDD+ implementation outcomes spread through a management period (e.g. 2013-2020).

Task 4 - Scale

Use information identified in the ‘Scale’ breakout group at the National REDD+ Strategy Workshop in November 2010 and documented in this report to inform the Strategic Financing Plan for REDD+ Implementation (cf. Task 1). The Strategic Financing Plan for REDD+ Implementation is to be incorporated into the National REDD+ Guidelines.

3.4 DISTRIBUTION

The purpose of this discussion was to elaborate elements of a strategy for the ‘benefit distribution’ component of National REDD+ Programme including the following attributes:

- Addressing drivers of forest carbon loss
- Maximising benefits to landowners
- Maximising strategic benefits to Fiji
- Linkages between REDD and A/R

From a purely carbon management point of view, the equitable distribution of direct and indirect benefits arising from REDD+ activities is an important component of project permanence whereby an equitable distribution of benefits can enhance the social and political durability of forest carbon management activities. Of course, appropriate benefit distribution is an important safeguard aspect of REDD+ activities irrespective of carbon management benefits due to the need for sustainable development to be socially as well as ecologically sustainable.

In practice, REDD+ activities will involve a combination of stakeholders, with initiatives sometimes driven by landowners, or private sector entities, or government agencies. Either way, it is important to ensure that the design and implementation of REDD+ activities address key distribution issues. Many of these distribution issues in REDD+ are resonant with distribution issues in other forms of rural development such as those with a long history in the timber industry (e.g. multistakeholder participation, financial issues, taxation and regulation, spread of co-benefits).

The National REDD+ Policy requires equitable distribution of benefits from REDD+ activities and as such the REDD+ Programme will benefit from a set of detailed Distribution Guidelines to be incorporated into the National REDD+ Guidelines.

Notes on Distribution arising from this breakout group session:

- Transparency and trust is crucial.
- Value chain and opportunity costs have to be transparently analysed (e.g. value of forgone income from logging concession), good accounting of baseline finances and actual project finances.
- Decision of carbon property rights should be made by authorities (PMO, cabinet etc), but we have to present it to them, in a transparent way (raising this issue at the attorney generals conference in December).
- Building on existing benefit sharing models e.g. from timber markets.
- Making clear which percentage goes to whom from the starts (landowner, government for facilitating, project costs...), taking international requirements into account.
- Government should work on cost-recovery basis, communicate that their share is as low as feasible.
- Costs could be subsidised by fees on logging licences (fees linked to carbon impact)
- Differing costs/tax/fees for environmentally destructive and sustainable practices (high impact logging vs REDD).
- Carbon liability (punishment for high forest emissions) as incentive to achieve national emission reduction.
- Engage with Land Bank to make it aware of REDD as potential land use.
- Pilot activities also financial demonstration activities to get an indication of costs.
- Develop framework for carbon ownership and benefit distribution, consultation by NLTB. (Responsible: Forestry. Timeline: 2nd quarter 2011 develop framework, Workshop end of 2nd quarter, then 3rd-4th quarters consultation by NLTB. Involvement of key stakeholders: PMO, Attorney Generals office, NLTB, Forestry, environment, Indigenous Affairs Board) wider consultation also with primary stakeholders, e.g. landowners, private sector.
- Inform Office of the Attorney General of this activity.

- Prepare a REDD+ Country PIN: Undertake a rough calculation of potential carbon opportunities of Fiji as a whole (1st quarter 2011). This will be useful when seeking higher level government support for National REDD+ Programme, because it will provide macro-economic data on the scale of potential benefits to the national economy arising from REDD+ carbon financing opportunities at a national scale (cf. Task 2).

Net beneficiaries of REDD income streams:

- Landowners.
- Forest companies.
- Government (Forestry dept, taxation revenues).
- NLTB.
- Land Bank.
- Project developers/investors.

Task 5 – Distribution: REDD+ Distribution Plan

Use information identified in the ‘Distribution’ breakout group at the National REDD+ Strategy Workshop in November 2010 and documented in this report to inform the preparation of a ‘REDD+ Distribution Plan’. The ‘REDD+ Distribution Plan’ is to be incorporated into the National REDD+ Guidelines (cf. Task 19).

3.5 NATIONAL FOREST AREA CHANGE ASSESSMENT

The purpose of this breakout discussion was to provide an update on the current status and progress for the historical forest area change assessment undertaken by SOPAC, and to determine any additional or outstanding tasks for this component of national forest carbon monitoring. This session was used to determine a plan for the execution of outstanding tasks or follow-up tasks perhaps associated with international linkages, peer review/validation, collaboration with international partners and research projects.

Discussion and presentations were delivered to describe the current status and progress for the historical forest area change assessment:

- Presentations by Forestry Department and SOPAC - Experiences from 2010 exercise with SOPAC provide starting point.
- Methodological problems were identified and discussed and impact the scoping of activities for 2011.

To continue the work on the national forest area change assessment, the breakout group identified the following tasks for 2011:

Task 6 – National Forest Area Change Assessment: Consolidation

Consolidate National Historical Forest Area Change Assessment by:

- Acquiring additional data from 2010 (urgently), probably ALOS AVNIR (SOPAC, GTZ).
- Process data from 1991, 2001, and 2010 for change detection analysis, including co-registration (SOPAC).
- Document an agreed methodology for forest area change assessment including a suitable forest definition (SOPAC, Forestry, international expert).
- Implement mapping of forest area change for 2 periods 1991-2001 and 2001-2010 using image-to-image interpretation and 0.5-1 ha MMU (SOPAC + Forestry).

Task 7 – National Forest Area Change Assessment: Training & Capacity Building

Training and Capacity Building:

- Participation and training of at least one Fiji Forestry Department staff to work on the image analysis with SOPAC.
- Re-activate GIS/RS national team on forest mapping (lead: Forestry).
- Develop a capacity building plan for Forestry to take on remote sensing assessment, including human resources, technical, Hard-Software etc. (SOPAC + Forestry).
- Arrange training for using IPCC LULUCF GPG (GTZ).
- Develop synergies with GTZ/SPC regional REDD+ programme.

Task 8 – National Forest Area Change Assessment: International Engagement

International Engagement and Research:

- Participation of Fiji experts in relevant international meetings (e.g. UNFCCC, GOFC-GOLD, World Bank, Coalition of Rainforest Nations) – potentially with the support of international policy and technical experts.
- Engage in remote sensing research activities (i.e. through the EU funded project by Wageningen University) to complement REDD+ readiness activities (Consider cooperation with Silviculture Research and Management Services Division) (Goal: agreement signed, activities started). High priority research topics include:
 - Time-series analysis to track forest change and degradation.
 - Use of multiple remote sensing data sources (i.e. Radar).
 - Accuracy assessment procedures.
 - Biomass mapping.
 - Data management and access.
- Exchange of graduate students with Forestry Research Division (i.e. Wageningen University, Forestry).

3.6 NATIONAL FOREST CARBON MONITORING

The purpose of this breakout group session was to develop a plan of activities for the next year to continue REDD monitoring readiness process (remote sensing) and capacity development, including consideration of links with international partners (i.e. EU project).

This session focused on the forward planning for remote sensing requirements as part of the national forest carbon monitoring system. This included the elaboration of a structure for moving forward on this that aligns with international MRV development relating to remote sensing and mapping. This session also looked into the linkages between remote sensing, forest inventory, and data management. This session was designed to provide strong linkages between the content of a data management system (RS, GIS, inventory data) and the need for transparent validation internationally.

The task was to determine:

- Clarification on clear purpose of the data management system.
- Back-end-data management system design and engineering.
- Front-end functionality requirements including:
 - Institutional ownership and hosting
 - Resources required to maintain
 - Skills/training requirements for database manager
- Front-end options (e.g. on-line dashboard).

The aim was to develop a plan of activities for the next year to continue REDD monitoring readiness process and capacity development, including consideration of links with international partners (i.e. EU project).

In a series of group discussions, four points were particularly addressed:

- Carbon measurements and Permanent Sample Plots (PSP)
- Training and capacity building
- Data management
- Monitoring of safeguards

3.6.1 Carbon Measurements And Permanent Sample Plots (PSP)

A series of issues and tasks were identified by participants at this breakout group as follows:

Task 9 – National Forest Carbon Monitoring: Check PSP Measurements

Check and evaluate outcome of 11x11 km grid PSP measurements:

- Assessment of variability (and biodiversity) and need for further stratification
- Assessment of ability of PSP measurements to capture different carbon relevant forest management activities (deforestation, afforestation, degradation).
- Clarify whether carbon stock change measured in the PSPs.
- Clarify methodology for measuring aboveground carbon (trees) with particular reference to height data.

Task 10 – National Forest Carbon Monitoring: Wood Density

Check availability of wood density of commercial species:

- More wood density measurement activities should be supported
- Group species into wood density classes where no specific information is available
- Measure wood density of more species (focus on important species) – link to REDD+ Research Plan.
- Define species with high priority

Task 11 – National Forest Carbon Monitoring: Long Term Plots

Check the availability and documentation of measured long-term plots (high priority)

- Conservation areas
- Forestry research department (Thomson and Nakavu plots), in Drawa, Nakavu reports – same design as national PSP plots but no carbon stock assessment
- USP (biodiversity, ecological) – plan to re-measure.

Task 12 – National Forest Carbon Monitoring: Mangroves

Incorporate mangroves into the National Forest Carbon Monitoring Programme by:

- Establishing PSPs in mangrove areas
- Clarify the allometric equations to use from other regions
- Collaborate with projects working on Mangroves (e.g. MESCAL – IUCN, IKI project).

Task 13 – National Forest Carbon Monitoring: Carbon Pools

Clarify carbon pool measurements by:

- Clarifying below ground pool estimation by compiling data on existing root to shoot ratios
- Undertaking research to fill data gaps on root to shoot ratios if any gaps exist by clarifying litter pool estimation by undertaking litter carbon pool research focusing on specific forest types where the litter pool is significant.
- Clarifying soil carbon pool estimation methodology in the context of mangroves and other wetlands (i.e. where soil carbon stocks and stock change is likely to be significant).
- Enhancing the accuracy of PSP plot measurement by using methods capable of capture degradation impact on the carbon pool

Task 14 – National Forest Carbon Monitoring: Stratify PSPs

Further stratifying the PSPs by:

- Deciding whether to include indigenous forest as one entity or as different carbon pools (above ground live, above ground dead, below ground live, soil carbon, litter).
- Adapting plot design to plantations.
- Determining how many plots are required to capture the variability of the forest.
- Minimizing the variability within one strata.

Note that additional forest carbon data analysis was undertaken during December 2010 associated with the calculation of the national forest carbon stock. This exercise also highlighted specific tasks required in order to improve the national forest inventory with respect to carbon, the results of which can be found in Section 4.5 of this report.

3.6.2 Training and Capacity Building

The purpose of training is to further inform National REDD+ Programme participants and stakeholders about REDD+, including technical dimensions of MRV, carbon financing, forest carbon policy and strategy issues. A series of issues and tasks were identified by participants at this breakout group as follows:

Need to ensure the sustainability of field staff, RS experts, and technical staff by:

- Developing a plan to create and retain a pool of skilled people
- Undertaking REDD+ readiness and implementation with the supervision of technical and policy experts in a manner that transfers capability from international to domestic human resources
- Increasing capacity of RS and vegetation staff/experts
- Increasing the REDD+ RS activities to be undertaken by existing staff within the Department of Forestry (consideration of regional capacity sharing)

Training themes for REDD+ Forest Carbon Monitoring training to include:

- Parataxonomy
- Reporting and data management
- Data analysis for carbon stocks
- Understanding existing measurements
- Interpreting tables
- Remote sensing
 - Engagement with SOPAC (People from Department of Forestry should work together with SOPAC)
 - RS training sessions (e.g. with GOFC-GOLD)

Engage the following training providers to provide training in forest carbon monitoring:

- Fiji National University
- Fiji Forestry Training Center
- University of the South Pacific
- NCSMED (National Center for Small and Medium Enterprises Development)

Acquire sufficient technical equipment required for training to include:

- Field work: Vertex for height measurements, and GPS equipment.
- Lab equipment for wood density, drying and weighing

Task 15 – National Forest Carbon Monitoring: Training

Use information from this breakout group summary on MRV Training and Capacity Building to inform a REDD+ Education, Training and Research Plan (cf. Task 30).

3.6.3 Data Management

A range of issues relating to data management were identified in this breakout group and are summarised below:

- Need to collect data on cultural and socioeconomic activities through questionnaires (relevant for fuel wood and safeguards), maybe only for sub-national scale
- Agriculture census also include socioeconomic information
- Harmonization & Inclusion of REDD+ data with other existing monitoring (e.g. FRA, MAR, Biodiversity)
- Develop a plan to integrate national datasets relevant to REDD+. These data sets include:
 - Protected areas (Forestry)
 - Agriculture census (Agriculture)
 - Concession areas and licenses (Forestry)
 - Historical data from Fiji Land Information System (Lands Department)
 - Agricultural lease boundaries (NLTB and Lands Department)
 - Water resources data (Publics works, Forestry, Lands Department, MRD)
- National data are scattered and not currently consistent with each other
- Data availability and accessibility for historical and new data
- Development of a national REDD database
 - Develop a data infrastructure and data model
 - Incorporation of existing datasets (data sharing, methodology)
 - Agreement on data distribution and sharing to allow for transparency
- User-friendly data management system interface.

Task 16 – National Forest Carbon Monitoring: Data Management Plan

Prepare a REDD+ Data Management Plan using information from this breakout group discussion and incorporating:

- Design elements of a back-end capable of meeting the technical requirements of forest carbon data management as part of a National REDD+ Programme
- Design elements of a user-friendly front-end interface to minimise operational management costs and increase accessibility and seek an exemplar from a data management system supplier.

3.6.4 Monitoring of Safeguards

Table 5 elaborates the priorities for the monitoring of safeguards for the implementation of a REDD+ programme.

Table 5. Monitoring of Safeguards

Monitoring of Safeguards	
Safeguard for REDD+ actions	Monitoring requirements
REDD+ should complement or be consistent with the objectives of national forest programs and relevant international agreements	<ul style="list-style-type: none">○ Link national forest priorities to REDD+ objectives and requirements. Document through regular reports.○ Responsible entity: Fiji REDD+ Steering Committee
Actions are transparent and effective national forest governance structures	<ul style="list-style-type: none">○ Establish REDD+ governance structure and update on their performance for transparency.○ Responsible entity: Fiji REDD+ Steering Committee
Respect for the knowledge and rights of indigenous peoples and local communities	<ul style="list-style-type: none">○ Provide a framework for consultations, direct involvements in REDD+ activities, benefit sharing, regular reporting○ Survey on community impacts and satisfaction○ Ensure transparency○ Responsible entity: Fiji REDD+ Steering Committee
Full and effective participation of relevant stakeholders	<ul style="list-style-type: none">○ Provide a framework of consultations, direct involvements in REDD+ activities, benefit sharing, regular reporting

	<ul style="list-style-type: none"> ○ Survey on community impacts and satisfaction ○ Ensure transparency ○ Responsible entity: Fiji REDD+ Steering Committee
Actions that are consistent with the conservation of natural forests & biodiversity	<ul style="list-style-type: none"> ○ Regular monitoring and reporting on impacts of REDD+ actions on natural forest and biodiversity ○ Responsible entity: Fiji REDD+ Steering Committee
Need to reduce displacement of emissions (leakage)	<ul style="list-style-type: none"> ○ Monitoring and reporting on the national level ○ Policy changes to avoid leakage ○ Responsible entity: Fiji REDD+ Steering Committee
Need to address the risks of reversals (non-permanence)	<ul style="list-style-type: none"> ○ Ensure a long-term monitoring ○ Policy changes to ensure permanence ○ Responsible entity: Fiji REDD+ Steering Committee

Task 17 – Safeguards: Guidelines for REDD+ Safeguards

Use information identified in this breakout group discussion to inform the preparation of a set of 'Guidelines for REDD+ Safeguards'. The 'Guidelines for REDD+ Safeguards' is to be incorporated into the National REDD+ Guidelines (cf. Task 19).

3.7 GOVERNANCE

The purpose of this breakout group session was to develop a detailed governance structure for a national REDD+ Programme. Based on the broad structure determined at the National REDD Policy and Scoping Consultation Workshop in 2009 and recorded in the report arising from that workshop (Weaver et al 2009).

It was initially intended to use the breakout group sessions on governance to determine national and sub-national governance structures, arrangements and preferences, but time sufficed only to determine this at a national scale.

The current status of REDD+ governance in Fiji is the more general governance arrangement concerning climate change in the form of the Climate Change Country Team (CCCT). A REDD+ Steering Committee was suggested in late 2009 but as yet has not been established due to the need for the elaboration of much more detail in relation to the terms of reference of this committee, its composition, procedures, and work programme. These issues were addressed in this breakout group session with details described in the following sections.

3.7.1 Establishment of REDD+ Steering Committee

The structure and functioning of the REDD Steering Committee should be resolved by means of a cabinet decision by the end of 2011. To this end a series of tasks need to be undertaken to progress this agenda as follows:

Table 6. Establishment of REDD+ Steering Committee

Establishment of REDD+ Steering Committee		
Task	Responsible Entity	Timeframe
Climate Change Country Team (CCCT) to endorse the establishment of the REDD+ Steering Committee (REDD+SC)	DoF to present proposal to CCCT to establish REDD+SC	First quarter 2011
Draft Guidelines for REDD+SC completed	REDD+SC	July 2011
National consultation on REDD+SC Guidelines	REDD+SC	July - October 2011
Draft Cabinet Paper completed	DoF	End October 2011
Cabinet Paper Submitted to Cabinet Subcommittee	DoF	End October 2011
Cabinet Paper submitted to Cabinet	Cabinet Subcommittee	November 2011

3.7.2 Composition of REDD+ Steering Committee

It was agreed that the REDD+ Steering Committee should be a multistakeholder committee represented by the following sectors:

- Forestry (Secretariat/chair)
- Environment
- Agriculture
- NLTB
- Private sector
- Fiji Pine
- NGO
 - International environmental NGO
 - Local community based NGO
- Resource /land owner
- USP/FNU

3.7.3 Rules of the REDD+ Steering Committee

- Up to 10 members requiring a quorum of 6 to make decisions.

- Additional organisations can be invited to contribute to or form a Technical Subcommittee.
- Note that the composition of the R+SC is similar to both the CCCT and Forestry Board.

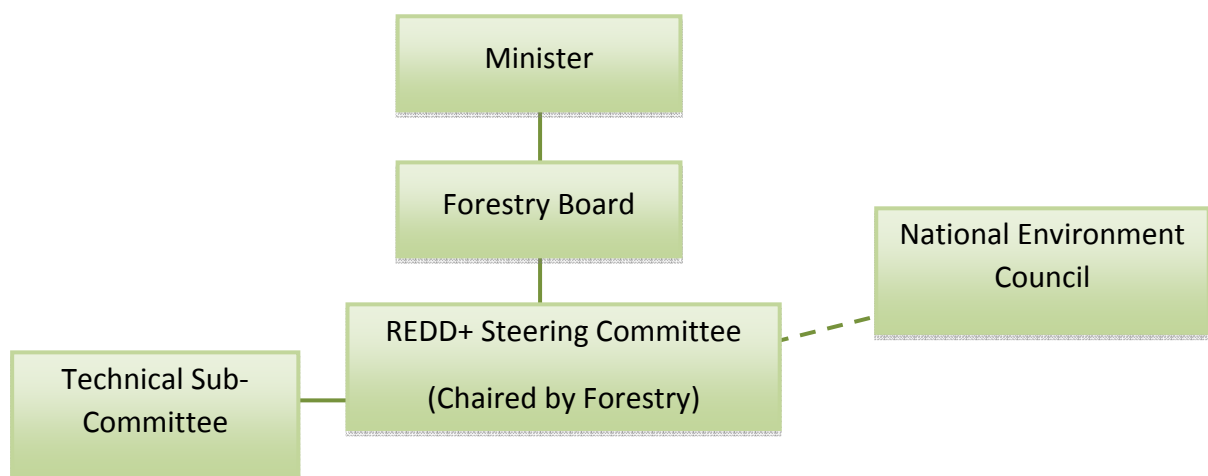
3.7.4 Terms of Reference of the REDD+ Steering Committee

- Steering the implementation of the Fiji REDD programme
- Power to make decisions on allocating tasks
- Coordinate and mobilise resources for REDD initiatives
- Reporting to Forestry board
- Communication/information to CCCT and NEC
- Alignment with international developments in forest governance integrity, and international REDD technical and policy developments

3.7.5 Structure of REDD+ Steering Committee

The structure of national REDD+ Governance in Fiji was determined at the National REDD+ Strategy Workshop in November 2010 and depicted in Figure 9.

Figure 9. Fiji REDD+ Governance Structure



The Fiji REDD+ Steering Committee is established by and reports to the Forestry Board. The REDD+ Steering Committee has a communication link to the National Environment Council. The REDD+ Steering Committee can establish Technical Sub-Committees as necessary, including (if and where necessary) an executive group responsible for undertaking certain tasks associated with the implementation of the national REDD+ Programme.

Task 18 – Governance: Establish of REDD+ Steering Committee

Department of Forestry prepares a proposal for the establishment of the REDD+ Steering Committee and submits this proposal to the Climate Change Country Team for approval. The proposal will contain the following elements as determined by the National REDD+ Strategy Workshop in November 2010 and documented in this section (3.7) of this report:

1. Composition of REDD+ Steering Committee
2. Rules of the REDD+ Steering Committee
3. Terms of Reference of the REDD+ Steering Committee
4. Structure of the REDD+ Steering Committee

3.7.6 National REDD+ Guidelines

The REDD+ Steering Committee will be responsible for preparing a set of National REDD+ Guidelines on REDD+ readiness and implementation. These guidelines will elaborate detailed aspects of the national REDD+ Programme, including issues/themes not already clarified in the national REDD+ Policy and/or Strategy and associated documents. The National REDD+ Guidelines will contain the following sections:

- REDD+ Governance Guidelines
- REDD+ Activity Guidelines
- REDD+ Financing Guidelines
- REDD+ MRV Guidelines
- REDD+ Safeguard Guidelines
- REDD+ Legal and Regulatory Guidelines
- REDD+ Distribution Guidelines
- REDD+ Education, Training and Research Guidelines
- REDD+ International Engagement Guidelines

The first task will be to prepare and finalise the REDD+ Governance Guidelines and add the subsequent components through time. Some (or all) will be able to be completed during 2011, depending on resourcing and other coordination factors. Others can be added during 2012 as they become completed. Any of the Guidelines can also be updated as part of the REDD+ Governance protocols defined in the REDD+ Governance Guidelines. One possibility would be to have the goal of a complete set of Guidelines for 2011 but with each component moving from a framework through to full guidelines by means of an iterative process through the course of 2011 and 2012. In this way the Guidelines can be continually (e.g.

annually) updated with each version labelled as such (e.g. National REDD+ Guidelines V1.1 2011; National REDD+ Guidelines V2.1 2012 etc.).

The REDD+ Guidelines will include (but not be restricted to) the following elements raised during this breakout group:

- Define objectives of the REDD+ Steering Committee and define a framework for monitoring the performance of the REDD+ Steering Committee. This will include the development of a template for quarterly and annual reports produced by the REDD+ Steering Committee for presentation to the Forestry Board and relevant governance stakeholders. **(Governance.)**
- Define a process of periodic (e.g. annual) review of REDD+ Steering Committee and its TOR. **(Governance.)**
- Clarification of role of Designated National Authority (DNA) with respect to REDD+ including recommendations on how the DNA could be structured to accommodate REDD+ issues. **(Legal and Regulatory.)**
- Definition of REDD+ activity types available to implementation projects and programmes **(Activity.)**
- Definition of REDD+ carbon property rights and transfer protocols **(Legal and Regulatory.)**
- Definition of REDD+ **Safeguards** to be incorporated into REDD+ implementation activities including:
 - Indigenous peoples rights
 - Biological diversity
- Definition of REDD+ benefit **distribution** protocols with particular regard to safeguards and benefit sharing with indigenous peoples. **(Distribution.)**
- Definition of terms for carbon trading transactions in REDD+ (identify clear and transparent process of engagement). **(Legal and Regulatory.)**
- Definition of guidelines on forest governance good practice – aligned with international developments in forest governance integrity and international REDD+ technical and policy developments **(Governance.)**
- Clarification of the relationship between REDD+ and existing policies and strategies **(Legal and Regulatory.)**
- Clarification of potential synergies with existing timber and forest certification schemes (e.g. FSC) **(Activity.)**
- Clarification of communication procedures and channels, including clarification of communication channels between the Fiji UNFCCC focal point and the REDD+ Programme to enable the participation of relevant Fiji technical and policy representation at international technical and policy meetings. This could include simple communication procedures such as automatic email forwarding of UNFCCC emails to the Conservator of Forests. **(Governance.)**
- Clarification of alignment of Fiji national REDD+ Programme with Pacific regional REDD+ information platform. **(International Engagement.)**

- Clarification on elements of National REDD+ Guidelines that would be more appropriately framed as Regulations. **(Legal and Regulatory.)**

The National REDD+ Guidelines become the operational template for the implementation of the National REDD+ Programme in conjunction with the REDD+ Strategy.

Task 19 – Governance: Draft National REDD+ Guidelines

REDD+ Steering Committee to appoint a Technical Sub-committee to prepare the Draft National REDD+ Guidelines with elements as determined by the National REDD+ Strategy Workshop in November 2010 and documented in this report above. Deadline for the Draft National REDD+ Guidelines (Version 1): 30 June 2011.

3.7.7 Multistakeholder Consultation on Draft REDD+ Guidelines

The process of producing the National REDD+ Guidelines will involve a process of drafting by a Technical Sub-committee of the REDD+ Steering Committee (with the support of technical and policy experts where necessary), followed by a multi-stakeholder consultation process, and finalised by endorsement by Cabinet as part of the REDD+ Steering Committee establishment process. The multistakeholder consultation process could be run as a national workshop in association with other aspect of the 2011 timetable for the national REDD+ Programme (e.g. one day of a 3 day workshop in the third quarter of 2011).

Stakeholders to be included in the multistakeholder consultation process for the development of the National REDD+ Guidelines will include 'Key Stakeholders', 'Primary Stakeholders', and 'Secondary Stakeholders' as follows:

Key Stakeholders (drive the process and oversee the drafting of the Guidelines)

- Department of Forestry
- Department of Environment
- SPC/GIZ

Primary Stakeholders (direct / principal beneficiaries and groups directly affected)

- Land owners
- Farmers
- Government
- Private sector (forest companies)
- NLTB
- Environmental NGOs participating in REDD+ activities (Conservation International)

Secondary stakeholders = indirectly affected

- NGOs
 - Nature Fiji
 - WWF
 - IUCN
 - Local NGOs
- Indigenous Affairs Board (IAB)
- Attorney Generals Office
- Prime Ministers Office
- Ministry of National Planning
- Ministry of Tourism
- CROP Agencies (USP, SPC, SPREP)

The stakeholder consultation process will involve the following:

- Preparation of Draft Guidelines from mandate provided by REDD+ Policy and REDD+ Strategy (and associated documentation).
- Public release of Draft Guidelines for written public comment (including public announcements – radio, television, print media, internet). Draft Guidelines to be made publicly available on the internet and through other non-electronic channels where appropriate.
- Presentation of Draft Guidelines and summary of public comment at REDD+ Guidelines consultation workshop.
- Consultation strategy for diverse engagement in the process (draft consultation document available on internet, linked to simplified public submission template (topic: yes/no/comment)).

Task 20 – Governance: REDD+ Guidelines Consultation

Technical Sub-committee of REDD+ Steering Committee to undertake a 3-month public consultation process for the Draft National REDD+ Guidelines as determined by the National REDD+ Strategy Workshop in November 2010 and documented in this report above. Deadline for completion of the consultation process: 30 September 2011.

Task 21 – Governance: Finalise REDD+ Guidelines (Version 1)

Technical Sub-committee of REDD+ Steering Committee to prepare final draft of National REDD+ Guidelines following input from the public consultation process. Deadline for completion of final draft National REDD+ Guidelines (Version 1): 20 October 2011.

Task 22 – Governance: REDD+ Guidelines Cabinet Paper

Department of Forestry to prepare Cabinet Paper on National REDD+ Guidelines, and submit Cabinet Paper to Cabinet Subcommittee. Deadline for submission of Cabinet Paper: End October 2011.

3.7.8 REDD+ Legal and Regulatory

Another key aspect of national REDD+ governance is the need to have in place a legal and regulatory framework that quality assures the Fiji REDD+ Programme (with particular regard to Forestry regulations), clarifies carbon property rights and transfer rules, clarifies the role of the Fiji DNA in REDD+, addresses risks, and effects appropriate distribution of benefits (e.g. tax liabilities and incentives; NLTB levies and leases).

Task 23 – Governance: REDD+ Legal and Regulatory Review

REDD+ Legal and Regulatory Review to:

- Regulate (where necessary) REDD+ implementation activities
- Clarify forest carbon property rights and transfer rules
- Clarify institutional arrangements and linkages (including NLTB role and rules)
- Clarify REDD+ distribution issues where appropriate (e.g. tax liabilities and incentives)

3.8 PILOT PROJECTS

This breakout group session involved a presentation of a case study of a forest carbon project from New Zealand (see Appendix 7) to provide participants with training to enable an informed discussion on the details of the project cycle, pilot project options, and priorities. The case study involved an example of an 'Improved Forest Management' (IFM) 'Logged to Protected Forest' (LtPF) project developed under the AFOLU methodological guidance of the Voluntary Carbon Standard (VCS), which can be considered world's best practice for project-based indigenous forest carbon projects. This case study illustrated the details of the project cycle for an indigenous carbon project quality assured under the

international voluntary carbon market. This presentation also helped to clarify the costs and technical requirements associated with different aspects of the project cycle.

This breakout group explored the different forest carbon project activity types available as potential pilot projects for the Fiji REDD+ Programme:

Table 7. Forest Carbon Management Activity Types

Forest Carbon Management Activity Types ²⁵			
Activity Code	Activity Name	Baseline Activity	Project Activity
RED-DtSFM ²⁶	Reducing Emissions from Deforestation – Deforestation to Sustainable Forest Management	Deforestation	Low Impact Selective Logging/Sustainable Forest Management
RED-DtPF	Reducing Emissions from Deforestation – Deforestation to Protected Forest	Deforestation	Forest Protection
IFM-LtPF	Improved Forest Management – Logged to Protected Forest	High or Low Impact Selective Logging	Forest Protection
IFM-RIL	Improved Forest Management – Reduced Impact Logging	High Impact Selective Logging/degradation	Low Impact Selective Logging/Sustainable Forest Management
IFM-ERA	Improved Forest Management – Extending Rotation Age	Short Rotation Age	Longer Rotation Age
IFM-LtHP	Improved Forest Management – Conversion of Low-Productive Forest to High-Productive Forest	Low Productive Forest	Sustainably Managed High Productive Forest
A/R	Afforestation, Reforestation	Non-Forest Land Use	Forest Land Use

This breakout group determined that the highest priority activity type was the conversion of high intensity logging of indigenous forest to sustainable forest management, with carbon financing designed to make up the financial shortfall between the two. This would fall under the Activity Type: IFM-RIL (Improved Forest Management – Reduced Impact Logging).

²⁵ These activity types are based on the VCS Guidance for AFOLU Projects (VCS 2008a).

²⁶ Both RED activity types defined here fall under the VCS category of REDD-APD (Avoiding Planned Deforestation).

The next highest priority was indigenous afforestation/reforestation of non-productive areas within the Fiji Pine lease. This would fall under the Activity Type: A/R (Afforestation/Reforestation). The breakout group determined that such a carbon project would need to involve a consultation with Fiji Pine landowners and a negotiation concerning of the distribution of carbon payments to landowners.

Ideally, it would be useful to undertake a pilot project for each activity type listed in Table x above. This could be undertaken by means of support from a range of donors and implementing agencies (including NGOs). It is also important that pilot projects showcase methodologies that address safeguards in an exemplary manner. This includes the need for full participation of indigenous peoples and other relevant stakeholders, protection and enhancement of biological diversity and climate change adaptation co-benefits, and integrity in forest governance.

In preparation for undertaking pilot project activities it would be useful to prepare a database of potentially suitable REDD+ pilot or full implementation activities. Such a database would need to include maps, land tenure, forestry concessions, and existing and planned land management activities plans. This information could then be used in the strategic implementation of REDD+ nationally either as a national activity or in a programmatic manner. Such a database could then be used as the basis for a strategic dialogue between Forestry, Agriculture, and NLTB on the synergies between agricultural and forestry land uses.

Task 24 – Pilot Projects: National REDD+ Resource Database

Preparation of a National REDD+ Resource Database that includes maps of different potential activity type locations, land tenure, forestry concessions, and existing and planned land management activities in each of these areas (cf. Fiji REDD+ Country PIN).

3.8.1 From Pilot To Programme

REDD+ implementation activities can be implemented as projects or as a programme of activities. Well-designed pilot projects have the potential to be developed as the starting point ('Inception Project') for a programme of activities that uses the same methodology for the same activity type, in the same country (or regionally). Each carbon project/programme involves developing a new methodology or adapting an existing methodology to the local situation – either way, the methodology and approach needs formal approval from the chosen carbon-financing instrument (e.g. a voluntary carbon market standard and registry).

Accordingly, a pilot project presents an opportunity to prove (certify) the methodology and prepare a proven carbon finance path for a particular activity type, and thereby become an

‘Inception Project’ for a programme of activities to be rolled out in an orderly fashion as part of a National REDD+ Programme.

For example, a pilot project could be designed as the starting point of a national programme of activities for the IFM-LtPF activity type in Fiji. Once the financing instrument certified the pilot project, this would open the door to rolling out a national programme of activities for this activity type across Fiji.

Task 25 – Pilot Projects: Develop Two Pilot Projects

Design and implement two pilot projects as Inception Projects for a programme of activities, and define how the programme will be implemented. The first Inception Project to be an IFM-RIL activity type. The second Inception Project to be an A/R activity type. The A/R Inception Project will involve a subset of the Fiji Pine eligible area and be designed to extended as a programme to the rest of the Fiji Pine lease areas where possible, with the potential to be used by other A/R project initiatives outside the Fiji Pine estate. Pilot projects to include:

1. Specification of carbon market standard and path to market
2. Methodology that takes account of the need to minimise complexity and project development and transaction costs
3. Project Description Documentation (PDD)
4. Strategy to address safeguards that include community and biodiversity considerations
5. Carbon credit marketing options

The programme of activities could be managed and implemented (and/or facilitated) by an agency established specifically for this task. Such an agency (e.g. called the ‘Fiji Forest Carbon Facility’) could be an executive agency established by and reporting to the REDD+ Steering Committee (similar to a technical sub-committee of the REDD+ Steering Committee). The Fiji Forest Carbon Facility (FFCF) could be responsible for the design and execution of each pilot project (‘Inception Project’) targeting each activity type. The FFCF could have a mandate to work in collaboration with private sector and NGO partner agencies but under the control of the REDD+ Steering Committee.

Task 26 – Pilot Projects: Fiji Forest Carbon Facility

Consider the establishment of a 'Fiji Forest Carbon Facility' (FFCF) as an executive agency of the REDD+ Steering Committee, complete with terms of reference and resourcing considerations. FFCF to be responsible for designing and implementing pilot projects and facilitating the implementation of associated programme of activities for each activity type. FFCF to also act as a technical advisory body to the REDD+ Steering Committee.

To ensure that the National REDD+ Programme was implemented in a strategic manner it would be important to clarify regulations (e.g. the Forest Decree) relating to independent forest carbon project initiatives and the way in which these would interact with the National REDD+ Programme, and in particular with the FFCF (if established).

Task 27 – Pilot Projects: Clarify Regulations

Clarify regulations on relationship between government and private sector REDD+ activities (cf. Task 23).

It is important to note that a national approach to REDD+ implementation financing (which may become the norm under the UNFCCC) would involve carbon transactions at an intergovernmental level. Here, Fiji (as a nation) would measure its forest carbon stock and stock change in relation to a Reference Emissions Level (REL), and trade carbon with other nations in relation to its performance through time. Sub-national carbon financing (e.g. landowner initiated projects) under a national level REDD+ instrument would need to be subject to controls that allowed for local initiatives, but ensured that such initiatives were compatible with the international financing arrangements.

This issue is all-important to the success of the National REDD+ Programme and deserves significant attention in strategic considerations: because it relates to the total volume of carbon financing that Fiji (as a nation) is able to attract through REDD+ implementation activities. To clarify, if REDD+ becomes incorporated into a future UNFCCC financing instrument (e.g. similar to the CDM under the Kyoto Protocol) then the largest sums of incentive payments (i.e. carbon prices) are likely to come through this instrument (provided there is sufficient demand for the carbon units among developed nations – in turn dependent on deeper binding emission reduction targets for those nations compared with the Kyoto Protocol). This is because the only current option for carbon credit sales from

REDD+ is from the international voluntary carbon market where carbon prices are significantly lower than in the international compliance (regulatory) carbon market.

To illustrate this point, imagine if Fiji were to engage its entire forest estate in a voluntary carbon market transaction in 2011, and lock its forests into a 30-year commitment (e.g. through a forward sale contract). In so doing, it would make itself ineligible for any carbon financing arising out of a future UNFCCC compliance instrument where UNFCCC carbon prices could be much higher – and the revenues for Fiji and its landowners higher also. At a smaller scale, imagine if Fiji were to implement a series of carbon projects through a programme of REDD+ activities during 2011 – 2014. If those activities also involved the forward sale of voluntary carbon that locked those forests into a 30-year supply contract, this collection of forests would become ineligible for participation in a UNFCCC compliance instrument for that same period. The key difference is net present value and associated financial risk – forward sales of (ex ante) voluntary carbon credits can provide income in a lump sum now (which can then be invested), whereas incremental (ex post) carbon credit sales provide much smaller net present cash flows but sustain them into the future for the life of the project.

Fiji opted for a ‘hybrid’ approach to REDD+ implementation that leaves the door open to a national level approach, but also enables a programme of activities or project scale activities to be undertaken.

Task 28 – Pilot Projects: Clarify Hybrid Approach

Clarify the strategic design of the ‘Hybrid’ approach within the context of the ‘Strategic Financing Plan for National REDD+ Implementation’, with particular reference to:

1. The interaction between different scales of the Hybrid (national, programme and project scale implementation activities)
2. The interaction of the different financing options and scales (e.g. voluntary and compliance carbon markets)
3. Financing and distribution at different scales (cf. Task 1 – Financing)

3.9 INTERNATIONAL POLICY & TECHNICAL ENGAGEMENT

This breakout group discussed the issue of how Fiji would engage with international policy and technical initiatives in REDD+. This would include policy and technical dialogue with international REDD+ policy, finance, and implementation agencies such as the UNFCCC, FAO, UNFF, IPCC, Multilateral Development Banks, bilateral donors, NGOs, and international carbon markets. The priority is to ensure that Fiji’s best interests are fully represented in a

coordinated manner, as a means to maximise policy, technical, and financial support for the National REDD+ Programme. The discussion focused on how to enhance the utilization of existing linkages and relationships and where necessary building new relationships.

A number of key issues were discussed that are summarised as follows:

3.9.1 UNFCCC

There is a need for better representation of forestry interests at the UNFCCC and to enable the REDD+ Programme to gather up-to-date information from the UNFCCC process in order to stay attuned to international developments in REDD+ policy and technical issues. Active participation at the UNFCCC meetings will also enhance opportunities to network with donors and technical support agencies.

One of the barriers to more effective Forestry participation at the UNFCCC is a communication gap between the UNFCCC Focal Point and the Department of Forestry. The Department of Environment is the UNFCCC Focal Point for Fiji, and breakout group participants agreed that a protocol for forwarding electronic notifications from the UNFCCC to Forestry was necessary. This would enable the Department of Forestry to anticipate forthcoming REDD+ policy (COP) and technical (SBSTA) meetings and make arrangements to attend these meetings where possible (internal arrangements with Foreign Affairs, and international arrangements with the UNFCCC). It was noted that there is often UNFCCC funding to support developing country participation at these events, but this funding can only be accessed if the Department of Forestry is aware of the opportunities and better engaged in the process.

The advantages of active participation in the UNFCCC process are significant as it enables Fiji to increase its own capacity in a learning by doing manner, gather important information to actively maintain its domestic performance in REDD+ in a way that aligns with worlds best practice, provides opportunities to network with other REDD+ nations to facilitate international cooperation (particularly with other Pacific REDD+ nations), and provides an opportunity to network with donors, funders, market instruments, and other international agencies relevant to REDD+ (e.g. UNFF, UNEP, FAO, International NGOs, Interim REDD+ Partnership, UNREDD, Coalition of Rainforest Nations, World Bank).

3.9.2 Interim REDD+ Partnership

Fiji is a participant country to the Interim REDD+ Partnership, but the Department of Forestry has had no engagement with this initiative, and was enlisted in this initiative without its knowledge. There are significant potential opportunities for financial, policy, and technical support through this initiative, but this is only possible if Fiji is able to actively engage.

3.9.3 UN-REDD Programme

The UN REDD Programme is the United Nations Collaborative initiative on REDD in developing countries and funded primarily by the Government of Norway. It would be worth Fiji considering engaging with the UN-REDD Programme to ensure that it does not miss out on potential funding opportunities for either REDD+ readiness or implementation activities.

3.9.4 Coalition For Rainforest Nations

Fiji is a participant of the Coalition for Rainforest Nations (CfRN), which developed and advocates international REDD+ policy at the UNFCCC on behalf of participant nations. If Fiji does not attend CfRN meetings or remain actively aware of CfRN activities, there is a chance that the CfRN will make policy recommendations on Fiji's behalf that are not in Fiji's best interests. There is usually funding to support participant nations to send representatives (including technical advisors) to attend CfRN meetings (Vanuatu has attended in the past). If Fiji is going to remain a participant of the CfRN it is in its best interests to participate in this initiative.

3.9.5 World Bank

Another international REDD+ initiative is the World Bank Forest Carbon Partnership Facility (FCPF). The FCPF supports developing country REDD+ programmes through the Readiness Mechanism (capacity building) and the Carbon Finance Mechanism (emission reductions – implementation). Even though Fiji is rapidly progressing in REDD+ Readiness through the generous support of the German Government, it will be useful for Fiji to consider possible sources of implementation finance for emission reduction incentive payments. The Carbon Finance Mechanism of the FCPF is therefore worth approaching for potential future implementation finance. The FCPF attends the UNFCCC meetings and so Fiji Forestry representatives at the UNFCCC will have an opportunity to engage with the World Bank at UNFCCC events.

3.9.6 Pacific Regional REDD+ Initiatives

REDD+ is now developing as a regional phenomenon in the Pacific with PNG, Vanuatu, and the Solomon Islands each engaging in their own REDD+ readiness activities, and each of which are now participants in the GIZ/BMU regional REDD+ project entitled: "Climate protection through forest conservation in the Pacific Island Countries". Furthermore, other smaller Pacific Island countries are engaging in REDD+ activities through a project entitled "Promoting Regional REDD+ Approach and REDD+ Readiness in Under-Supported Regions of Asia/Pacific" launched in November 2010. This project is funded by the Japan-UNDP Partnership Fund and involves a partnership between Japan and the UNREDD programme.

Participant countries of this initiative are: Fiji, Kiribati, Marshall Islands, Palau, Samoa, Solomon Islands and Tonga, according to the UN-REDD website.²⁷ Given that Fiji is listed as a participant country to this initiative, it is important that the Fiji Department of Forestry engage with the project to ensure that there is adequate coordination with existing initiatives. At a regional scale the project aims to establish a regional platform to promote coordination and collaboration in REDD+ capacity building.

There is also room for better representation of the Fiji REDD+ position among Pacific regional forums including PIF, SPREP, and SPC, including the Pacific Heads of Forestry (HOF) and the Heads of Agriculture and Forestry (HOAF) meetings.

As can be seen from the potential opportunities arising from more active international policy engagement in REDD+, it is well worth considering a more systematic programme of coordinated international engagement. One way of achieving this is to develop a strategic International REDD+ Policy Engagement Plan to be incorporated into the National REDD+ Guidelines and enacted without delay. The need to develop a plan arises from the need to:

- Develop a set of goals and priorities for international policy engagement focusing on international financing, policy/technical support, and regional coordination
- Coordinate domestic communication channels (e.g. UNFCCC Focal Point and Department of Forestry)
- Identify necessary human resources (coordination between staff from DoF, DoE, and Foreign Affairs, and policy/technical advisors)
- Coordinate and allocate domestic and international funding to enable participation
- Coordinate synergies for Fiji engagement with the different international REDD+ initiatives
- Develop an annual timetabling of participation with different initiatives

Discussions on international technical engagement were undertaken in the breakout group focusing on forest carbon monitoring – see Section 3.5 and Task 8 above.

Task 29 – International Policy and Technical Engagement

Develop and implement an International REDD+ Policy and Technical Engagement Plan using information provided in this section (3.9), and Section 3.5 of this report, consistent with the REDD+ Policy and the REDD+ Policy and Scoping Consultation Report. Incorporate this Plan into the National REDD+ Guidelines (cf. Task 19).

²⁷ See announcement here: http://www.un-redd.org/UNREDD_Japan_Partnership_Project/tabid/6379/Default.aspx

3.10 EDUCATION, TRAINING & RESEARCH

Education, training and research formed cross cutting themes for each area explored in the breakout group sessions. The original intention was to gather information from each group discussion on education, training, and research requirements, but time did not allow for this to happen systematically. What was clear however, was the need for more work to be undertaken to develop a coherent plan for the integration of education, training and research into the REDD+ programme that draws upon the information gathered in this workshop.

The key goal here is to build local capacity in terms of policy and technical knowledge, and local data sources to support the implementation of REDD+.

It was beyond the scope of this report to undertake the detailed analysis and planning needed for the development of a coherent REDD+ Education, Training and Research Plan, but this is something that is a high priority for the near term implementation of the REDD+ Strategy.

Key themes in the development of a REDD+ Education, Training and Research Plan are the integration of policy and technical themes in these three areas of capacity building. Breakout group discussions summarised in section 3.5 of this report present information on priorities from a technical (MRV) perspective.

3.10.1 Education

Education here refers to the engagement of the education provider institutions to provide educational content relevant to REDD+ policy and technical themes. This will predominantly involve some form of integration of REDD+ into educational outputs of tertiary education institutions such as USP and Fiji National University. The likely place for REDD+ contributions in REDD+ at USP are in the form of postgraduate educational programmes that already focus on climate change mitigation, which provide an opportunity for REDD+ integration into such programmes. One capacity constraint would be the availability of suitable teaching expertise but it may be possible to outsource this at least in the near term. Postgraduate programmes could also be designed to suit both a professional development audience and an academic training audience and offered in the form of a diploma in forest carbon management. Here an annual cycle of intensive (e.g. one week) courses could be offered, whereby different themes are offered at different times of the year, and the completion of a minimum number of these courses (e.g. 5 or 6) could amount to a Diploma. Such an approach could also be integrated into an applied masters programme for full time students sitting along side incumbent staff of practitioner agencies undertaking professional development training. Such arrangements and the design of such a programme would need to be incorporated into a REDD+ Education, Training and Research Plan.

3.10.2 Training

There is also the need for policy and technical training for incumbent staff in policy and management agencies responsible for implementing the Fiji REDD+ Programme. Such training can occur in the form of workshops targeting specific aspects of REDD+ capacity transfer. Another aspect of training worth considering in an Education, Training and Research Plan is that which can occur in association with international experts assisting in the REDD+ Programme as a learning-by-doing exercise. Among the most effective forms of educational delivery is learning-by-doing and given that there is a pool of international and domestic experts available to the REDD+ programme, it would be useful to take advantage of occasions when they are working with the REDD+ Programme to engage them in well designed training work. Another form of training is the active participation of senior staff at the Department of Forestry at UNFCCC and other international policy and technical meetings as discussed in Section 3.9 above.

3.10.3 Research

As for research, there are some important knowledge and data gaps in REDD+ in Fiji and the region that can be filled by means of a well-designed Research Plan that sets priorities in policy and technical research, identifies potential sources of funding to undertake this research, and develops and implements a strategy to undertake such research and ensure that the information is readily available to the REDD+ Programme. Some targeted research priorities have been identified in this report for MRV data and information gathering (Section 3.5 and Section 4), and there is also room for targeted research in policy and social dimensions of REDD+ implementation. An example of the latter could include research to assist the development of a Safeguards programme in REDD+, as well as action research associated with the design and implementation of pilot projects.

Task 30 – Education, Training and Research

Prepare a REDD+ Education, Training and Research Plan using information gathered from each subsection of Section 3 of this report, Section 4 of this report, the Fiji REDD+ Policy and Scoping Consultation Report, and incorporating elements from international REDD+ training manuals.

The Education component will identify the range of educational capacity building needed for successful implementation of the national REDD+ Programme, suitable educational delivery agencies, and potential resourcing for such educational delivery.

The Training component will identify training needs of different stakeholders, training delivery agencies (including in-country capacity, outsourcing, and training capacity building), training costs, potential sources of additional funding, and synergies with other related training programmes (cf. Task 15).

The Research component will identify data, information, and knowledge gaps for the successful implementation of the Fiji REDD+ Programme; identify information already gathered by this programme that could be published in research publications; resourcing needs for research, and possible sources of funds and human resources to complete priority research tasks.

References

- Christophersen, T. 2010. REDD-plus and Biodiversity. Side event at UNFCCC COP 16 EU Pavilion, 30 November 2010. Secretariat, Convention on Biological Diversity. Available at: <http://www.cbd.int/cooperation/pavilion/cancun-presentations/2010-11-30-Christophersen-en.pdf>
- GOFC-GOLD 2009. A Sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation. GOFC-GOLD Report version COP-15-1, (GOFC-GOLD Project Office, Natural Resources Canada, Alberta, Canada. Available at: <http://www.gofc-gold.uni-jena.de/redd/>
- Herold, M. and M. Skutch 2009. Measurement, reporting and verification for REDD+: objectives, capacities and institutions, National REDD Architecture and Policies, CIFOR book. Available here: http://www.cifor.cgiar.org/publications/pdf_files/Books/BAngelsen0902.pdf
- Interim REDD+ Partnership 2010. Synthesis Report. REDD+ Financing and Activities Survey. Prepared by an intergovernmental task force. Interim REDD+ Partnership, May 2010. Available here: <http://www.oslocfc2010.no/>
- IPCC 2003. Good Practice Guidelines (2003) on Land Use Land Use Change and Forestry (LULUCF). Intergovernmental Panel on Climate Change. Available at: <http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html>
- IPCC 2006. 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4: Agriculture Forestry and other Land Uses (AFOLU). Intergovernmental Panel on Climate Change. Available at: <http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html>
- IPCC 2010. IPCC Expert Meeting on National Forest GHG Inventories eds: Eggleston H.S., Srivastava N., Tanabe K., Baasansuren J., National Forest GHG Inventories – a Stock Taking, Pub. IGES, Japan 2010. IPCC Task Force on National Greenhouse Gas Inventories (TFI). Available at: http://www.ipcc-nggip.iges.or.jp/meeting/pdfiles/1002_FM_Meeting%20report.pdf
- Krug, T. 2008. Detection of selective logging for estimating and monitoring forest degradation: methodologies and experiences in Brazil. Presentation at the UNFCCC Workshop on Methodological Issues relating to Reducing emissions from Deforestation and Forest Degradation in Developing Countries, Tokyo 25-27 June.
- Parker, C., Mitchell, A., Trivedi, M., Mardas, N. 2009. The Little REDD+ Book. Global Canopy Programme, John Krebs Field Station, Oxford OX2 8QJ, UK.
- Payton, I., and Weaver, S.A. 2011. Fiji Forest Carbon Stock Assessment V1 2011. Pacific-German Regional Programme, Adaptation to Climate Change in the Pacific Island Region, Suva, January 2011.
- Tokaduadua, E. 2010. Support on REDD Through CBD COP 10 Decisions. Department of Environment presentation to the Fiji REDD+ Strategy Workshop 25 - 26 November 2010, Novotel Hotel, Lami, Suva.

- UN-REDD 2010. Initial National Programme Document – Solomon Islands. UN Collaborative Programme On Reducing Emissions From Deforestation And Forest Degradation In Developing Countries National Programme Document. UN-REDD Programme 5th Policy Board Meeting, 4-5 November 2010, Washington DC.
- UNFCCC/SBSTA 2010. Report on the informal meeting of experts on enhancing coordination of capacity-building activities in relation to using the Intergovernmental Panel on Climate Change guidance and guidelines as a basis for estimating forest-related greenhouse gas emissions and removals, forest carbon stocks and forest area changes, Bonn, Germany, 25–26 May 2010. Available at: http://unfccc.int/methods_science/redd/items/5603.php
- VCS 2008a. Voluntary Carbon Standard Guidance for Agriculture, Forestry and Other Land Use Projects. Available at: <http://www.v-c-s.org/docs/Guidance%20for%20AFOLU%20Projects.pdf>
- VCS 2008b. Voluntary Carbon Standard Tool for AFOLU Methodological Issues. Available at: <http://www.v-c-s.org/docs/Tool%20for%20AFOLU%20Methodological%20Issues.pdf>
- VCS 2008c. Voluntary Carbon Standard Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination. Available at: <http://www.v-c-s.org/docs/Tool%20for%20AFOLU%20Non-permanence%20Risk%20Analysis%20and%20Buffer%20Determination.pdf>
- Weaver, S.A. 2006. Is Reducing Deforestation an Impermanent Contribution to Emissions Reduction? Submission to UNFCCC SBSTA 24, Bonn, Germany, May 2006.
- Weaver, S.A. 2007. The Vanuatu Carbon Credits Project: A Case Study of Forest Degradation and Flat Historical Baselines. UNFCCC Second SBSTA Workshop on Reducing Emissions from Deforestation in Developing Countries, Cairns, March 2007.
- Weaver, S.A. 2007. The Vanuatu Carbon Credits Project: A Case Study of Forest Degradation and Flat Historical Baselines. UNFCCC Second SBSTA Workshop on Reducing Emissions from Deforestation in Developing Countries, Cairns, March 2007.
- Weaver, S.A. 2008a. Meeting Report – Vanuatu Delegate. Design Meeting on the World Bank Climate Investment Funds. Potsdam, Germany, May 21, 22, 2008.
- Weaver, S.A. 2008b. Sustainable Forest Management for Climate Change Adaptation and Mitigation in Vanuatu. Global Climate Change Alliance and World Bank Concept Agreement, September 2008.
- Weaver, S.A. 2010. REDD+ Financing and Activity Types. Project Inception Workshop. Climate Protection through Forest Conservation in the Pacific Island Countries, 22nd–24th November 2010, Novotel Hotel, Lami, Fiji. Available here: http://www.spc.int/lrd/index.php?option=com_docman&task=cat_view&gid=211&Itemid=48
- Weaver, S.A. 2011. Fiji REDD+ Strategy. Pacific-German Regional Programme, Adaptation to Climate Change in the Pacific Island Region, Suva, January 2011.
- Weaver, S.A. and Hewitt, T. 2010. Voluntary Carbon Market Opportunities for Maori Owners of Indigenous Forest. Project Overview Report V1. Carbon Partnership Ltd.

- Weaver, S.A. Herold, M., and Payton, I. 2009. Fiji REDD Policy & Scoping Consultation. Pacific-German Regional Programme, Adaptation to Climate Change in the Pacific Island Region, Suva, September 2009.
- Weaver, S.A. Hewitt, T., and Payton, I.J. 2010. Methodology for Improved Forest Management, Conversion of Logged to Protected Forest, In New Zealand Non-Kyoto Indigenous Forest. NZ IFM-LtPF Methodology V1. Carbon Partnership Ltd.
- Weaver, S.A., Gavin, M., Warrick, O., Leathers, A. 2007. Socio-Economic Good Practice Guidance for Reducing Emissions from Deforestation in Developing Countries. Phase I Project Report No. 2. Vanuatu Carbon Credits Project. School of Geography, Environment and Earth Sciences, Victoria University of Wellington.
- Weaver, S.A., Hewitt, T., Payton, I.J., and Barringer, J. 2010. Rowallan-Alton Forest Carbon Project. Project Description Documentation for Improved Forest Management, Conversion of Logged to Protected Forest in Southland, New Zealand. Carbon Partnership Ltd.
- Weaver, S.A., O'Sullivan, B., Ward, M., Herold, M., and Napat, J. 2007. Vanuatu. Country Submission on Reducing Emissions from Deforestation in Developing Countries, Subsidiary Bodies for Technological and Scientific Advice, UNFCCC, February 2007.

Appendices

APPENDIX 1 – ABBREVIATIONS AND ACRONYMS

A/R	Afforestation/Reforestation
ACCPIR	Adaptation to Climate Change in the Pacific Island Region
ADB	Asian Development Bank
AFOLU	Agriculture, Forestry and Other Land Uses
APCF	Asia Pacific Carbon Fund of the Asian Development Bank
BMU	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BMZ	German Federal Ministry for Economic Cooperation and Development
CBFF	Congo Basin Forest Fund
CCB	Climate Community and Biodiversity Standard
CDM	Clean Development Mechanism
CCCT	Climate Change Country Team
CI	Conservation International
CIFOR	Centre for International Forestry Research
COP	Conference of Parties
CTU	Carbon Trading Unit
DNA	Designated National Authority
DOF	Department of Forests
EU-ETS	European Union Emissions Trading Scheme
FAO	Food and Agriculture Organization
FAO FRA	Food and Agriculture Organization Forest Resources Assessment
FCF	Future Carbon Fund of the Asian Development Bank
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Programme of the World Bank
FLIS	Fiji Land Information System
FSC	Forest Stewardship Council
GHG	Greenhouse Gas
GIS	Geographical Information System
GPG	Good Practice Guidance

GIZ	Deutsche Gesellschaft fuer Internationale Zusammenarbeit (German International Cooperation)
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
ICCTF	Indonesia Climate Change Trust Fund
ICDP	Integrated Conservation and Development Projects
IFCI	International Forest Carbon Initiative (Australian Government)
IFM	Improved Forest Management
ILC	Indigenous and Local Communities
IPCC	Intergovernmental Panel on Climate Change
KPCP1	Kyoto Protocol First Commitment Period (2008-2012)
LCA	Long Term Collaborative Action
LULUCF	Land Use, Land Use Change and Forestry
MDB	Multilateral Development Bank
MRV	Measurement/Monitoring Reporting and Verification
NAPA	National Adaptation Programme of Action
NEC	National Environment Council
NFI	National Forest Inventory
NGOs	Non-Governmental Organizations
NZ ETS	New Zealand Emissions Trading Scheme
OCCES	Office of Climate Change and Environmental Sustainability (PNG)
PDD	Project Description Documentation
PES	Payment for Ecosystem Services
PFSI	Permanent Forest Sink Initiative
PIC	Pacific Island Countries
PSP	Permanent Sample Plots
REL	Reference Emission Level
REDD	Reducing Emissions from Deforestation and Degradation
REDD+	REDD, Afforestation/Reforestation, and forest conservation
RGGI	Regional Greenhouse Gas Initiative (USA)
R-Package	REDD Readiness Package
R-PIN	REDD Readiness Plan Idea Note
R-PP	REDD Readiness Preparation Proposal
SBSTA	Subsidiary Bodies for Scientific and Technological Advice (UNFCCC)

SFM	Sustainable Forest Management
SI	Solomon Islands
SPC	Secretariat of the Pacific Community
TAP	Technical Advisory Panel
TNC	The Nature Conservancy
UNDP	United National Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
USP	University of the South Pacific
VCCP	Vanuatu Carbon Credits Project
VCS	Voluntary Carbon Standard
VER	Verified Emission Reduction
WB	World Bank
WCI	Western Climate Initiative (USA, Canada)
WCS	The Wildlife Conservation Society

APPENDIX 2 – WORKSHOP PROGRAMME

PROGRAMME

Day 1: 25 November 2010				
8.30	REGISTRATION			Secretariat
9.00	OPENING SESSION			
9:00	Opening prayer			
	Welcoming address		Fiji Forestry Department	
	Opening remarks		Department of Environment	
	Opening remarks		Dr Hermann Fickinger, GTZ	
	Official opening		Ms Penina Cirikiyasawa, Deputy Secretary, Fisheries and Forests	
9:30-9:45	Workshop objectives and overview of programme		Sean Weaver	
9:45-10:15	Morning Tea			
10:15-12:00	PLENARY 1: INTRODUCTION AND CURRENT STATUS <i>Presentations and discussions</i>			
10:15-10:50	International REDD+ Policy & Finance Update		Sean Weaver & Martin Herold	P1
10:50-11:10	Fiji’s Position in CBD & REDD+ Negotiations		Eleni Tokaduadua	P2
11:10-11:30	Fiji REDD+ Policy and Supporting Legislation		Samuela Lagataki	P3
11:30-11:50	National Forest Carbon Stock Estimation - Status Report		Samuela Lagataki & Ian Payton	P4
11:50-12:15	National REDD Strategy: Overview of Tasks <ul style="list-style-type: none">Update on REDD Roadmap and Project Plan of operationSetting the workshop process for the afternoon		Sean Weaver	P5
12:15-1:15	Lunch			
1:15-3:00	PARALLEL SESSION 1: POLICY AND TECHNICAL BREAKOUT GROUPS			
1:15-3:00	Policy Group (Weaver) <u>Financing:</u> Clarify financing priorities, strategies, and workstreams (grant, market, barter, bilateral, and domestic instruments) Determine Project Plan for implementation	Technical Group 1 (Herold) <u>Scope</u> Determine how different activity types identified in the Draft National REDD+ Policy will be implemented, supported and monitored in the National REDD+ Programme. Determine Plan for implementation	Technical Group 2 (Payton) <u>Scale</u> Determine structure of national and sub-national components of hybrid scale national REDD Programme Determine Project Plan for implementation	B1
3:00-3:30	Afternoon Tea			
3:30-3:50	National Forest Area Change Assessment - Status Report		Wolf Forstreuter & Josua Wakolo	P6
3:50-5:20	PARALLEL SESSION 2: POLICY AND TECHNICAL BREAKOUT GROUPS			

3:50-4:30	Policy Group (Weaver) <u>Distribution:</u> Develop detailed strategy for benefit distribution component of national REDD+ Programme <ul style="list-style-type: none"> ○ Addressing drivers of forest carbon loss ○ Maximising benefits to landowners ○ Maximising strategic benefits to Fiji ○ Linkages between REDD and A/R Determine Project Plan for Implementation	Technical Group 1 (Herold) <u>National Forest Area Change Assessment:</u> Discuss the current status and progress for the historical forest area change assessment	Technical Group 2 (Payton) <u>National Forest Carbon Stock and Stock Change Calculation:</u> Determine Project Plan for implementation of outstanding tasks	B2
4:30-5:30		Technical Group 1 (Herold) <u>National Forest Carbon Monitoring:</u> Develop a plan of activities for the next year to continue REDD monitoring readiness process (remote sensing) and capacity development, including consideration of links with international partners (i.e. EU project)	Technical Group 2 (Payton) <u>National Forest Carbon Inventory</u> Determine Project Plan for implementation	B3

Day 2 – 26 November 2010				
9:00-9:15	National REDD Strategy: Overview of Tasks		Sean Weaver	P7
	Setting the workshop agenda for the day			
9:15-12:00	PARALLEL SESSION 3: POLICY AND TECHNICAL BREAKOUT GROUPS			
9:15-10:00	Policy Stream (Weaver) <u>Governance 1: National Level</u> Clarify governance structure for National REDD+ Programme Determine Project Plan for Implementation	Technical Stream (Herold & Payton) <u>National Forest Carbon Monitoring</u> <ul style="list-style-type: none"> ○ Remote Sensing ○ Forest Inventory ○ Forest carbon data management Determine Project Plan for Implementation		B4
10:00-10:30	Morning Tea			
10:30-11:30	Policy Stream (Weaver) <u>Governance 2: Legal Clarification</u> <ul style="list-style-type: none"> ○ Carbon property rights and transfer rules ○ Government (licences, taxation) ○ NLTB (lease and levies) ○ Structure and role of Designated National Authority (DNA) Make recommendations for each of the above. Determine Project Plan for Implementation	Technical Stream (Herold & Payton) <u>National Forest Carbon Monitoring</u> <ul style="list-style-type: none"> ○ Remote Sensing ○ Forest Inventory ○ Forest carbon data management Determine Project Plan for Implementation		B5

11:30-12:00	Policy Stream (Weaver) <u>Governance 3: Sub-national governance</u> <ul style="list-style-type: none">○ Transparent counter-party to grant or market finance providers○ Linkage to national level programme governance Make recommendations for each of the above.	Technical Stream (Herold & Payton) <u>National Forest Carbon Monitoring</u> <ul style="list-style-type: none">○ Remote Sensing○ Forest Inventory○ Forest carbon data management Determine Project Plan for Implementation	B6	
12:00-1:00	Lunch			
9:15-12:00	PARALLEL SESSION 4: POLICY AND TECHNICAL BREAKOUT GROUPS			
1:00-3:00	Policy Group (Weaver) <u>Pilot Project</u> Project Components for project scale option <ul style="list-style-type: none">○ Finance Instrument○ Project cycle○ Activity type○ Methodology○ Project site/s○ PDD○ Path to market Determine Project Plan for Implementation	Technical Group 1 (Herold) <u>International Policy Engagement</u> <ul style="list-style-type: none">○ Present and discuss process for FAO FRA 2010, in particular the remote sensing survey○ Global Institutions (UNFCCC, IPCC, FAO, CBD, World Bank, Asian Development Bank)○ Multilateral (Regional)○ Bilateral Make recommendations for each of the above.	Technical Group 2 (Payton) <u>National Forest Carbon Monitoring</u> <ul style="list-style-type: none">○ MRV Education○ MRV Technical Training○ MRV Research Make recommendations Determine Project Plan for Implementation	B7
3:00-3:30	Afternoon Tea			
3:30-5:00	PLENARY 3: COMBINED POLICY AND TECHNICAL STRATEGY WORKSHOP			
3:30-4:30	Finalising Fiji REDD+ Strategy Presentation of each component of the draft REDD+ Strategy project plan with discussion, clarification, synthesis, and agreement/sign-off from plenary stakeholders	Sean Weaver Martin Herold Ian Payton	P8	
4:30-5:10	Finalising strategy elements and clarifying the way forward	Hermann Fickinger and Sean Weaver	P9	
5:10-5:30	Closing remarks from participants Official closing			

APPENDIX 3 – LIST OF PARTICIPANTS

NAME	DESIGNATION	CONTACT
Department of Forestry		
1. Mr. Inoke Wainiqolo	Conservator of Forests	Level 3, Takayawa Building Toorak Phone: (679) 3312995 Fax: (679) 3310679 Email: wainiqoloinoke@gmail.com
2. Mr.Samuella Lagataki	Deputy Conservator - Services	Level 3, Takayawa Building Toorak Tel: (679) 3301611 Fax: (679) 3310679 Email: samuella_lagataki@yahoo.com
3. Ratu Tomasi Kubuabola	Deputy Conservator - Operations	Level 3, Takayawa Building Toorak Tel: (679) 3301611 Fax: (679) 3310679 Email: tevekay@yahoo.com
4. Mr. Sevanaia Tawake	Principal Timber Utilisation Officer	Fiji Forestry Training Centre Tel: 3393611 Email: tawakesevanaia@gmail.com
5. Mr. Josua Wakolo	Principal Management Officer	Management Services Division Colo-i-Suva Forestry Department Tel: 3320667 josuawakolo@yahoo.com.au
6. Mr Eliko Senivasa	Divisional Forestry Officer - Northern Division	senivasa@yahoo.com
7. Mr Pita Rokotuibau	Principal Extension Officer	
8. Mr Aisake Vucago	Forestry Research Division	Research Division, Colo-i-Suva Phone:(679) 3322 389
9. Mr Viliame Tupua	GIS Officer	Management Services Division Colo-i-Suva Forestry Department Tel: 3320667
10. Leilani	Planning	

Department of Environment		
11. Ms Eleni Tokaduadua	Principal / Biodiversity Unit	P.D. Patel Building, Raojibhai Patel St P O Box 2109, Government Building Suva Tel: (679) 3311 699 / Fax : (679) 3312 879 Email : etokaduadua2@environment.gov.fj
12. Ms Kirti Chaya	SNC Coordinator	P.D. Patel Building, Raojibhai Patel St P O Box 2109, Government Building Suva Tel: (679) 3311 699 /Fax : (679) 3312 879 kirti.chaya@environment.gov.fj
Department of Land Resources Planning and Development		
13. Akuila Raibevu	Agriculture Officer	Koronivia Research Station P O Box 5442, Raiwaqa Tel: (679) 3477044 ext. 351 /Fax : 3480120 Email:
Fijian Affairs Board		
14. Mr Ken Cokanasiga	Executive Officer Provincial Services (FAB)	2 nd Floor, NLTB Building, 431 Victoria Parade,Suva Tel: 3304200 ext 219 Mob : 9295813 Fax: 3305 115 Email: kcokanasiga@gmail.com
Resource Owner Representatives		
15. Ms Titilia	Research & Development NLTB	NLTB Building, 431 Victoria Parade,Suva PO Box 116, Suva Tel: 3312733 Ext : 608 Fax : 3301666 Email:
16. Mr Malakai Vonokula	Operations Officer Drawa Land Owners Association	Drawa Village, Vanua Levu Tel : 8232 249 Mob : 7195 203
17. Ratu Osea Gavidi	Viti Land Resource Owners Association	3 Harper Place, Reservoir Rd P. O. Box 16612 Suva Tel: 9255500/3372380 Email: spearheadturaga@yahoo.com

18. Ratu Wame Gavidi	Viti Land Resource Owners Association	3 Harper Place, Reservoir Rd P. O. Box 16612 Suva Tel: 9255500/3372380 Email: wamegavidi@yahoo.com
19. Mr Sakiasi Veitogavi	Naco Chambers	Tel: 3318322 / 9918365
20. Ms Emma Roberts		
NON-GOVERNMENT ORGANISATIONS		
21. Mr Sefanaia Nawadra	Director Conservation International 3 Ma'afu Street, Domain	Tel: 3301807 Mob : 9351696 Fax : 3305092 Email : snawadra@conservation.org
PRIVATE SECTOR		
22. Mr Adriu Nabora	Fiji Pine Limited	
PACIFIC ISLANDS APPLIED GEOSCIENCE COMMISSION (SOPAC)		
23. Dr Wolf Forstreuter	GIS Expert	Tel: +679-3381377 ext. 237 Fax: +679-3370040, +6793384461 Email: wforstreuter@yahoo.co.uk
UNIVERSITY OF THE SOUTH PACIFIC (USP)		
24. Mr Marika Tuiwawa	Curator – South Pacific Regional Herbarium	Lower Laucala Campus University of the South Pacific Phone : 3212970 Fax : 3300373 Email : tuiwawa_m@usp.ac.fj
SECRETARIAT OF THE PACIFIC COMMUNITY (SPC)		
25. Mr Inoke Ratukalou	LRD Acting Director	Secretariat of the Pacific Community Luke Street, Nabua Private Mail Bag, Suva, Fiji Tel: (679) 3370 733 ; Fax: (679) 3370 021 Email: InokeR@spc.int
26. Mr Sairusi Bulai	Coordinator – Forest and Trees Land Resources Division	Secretariat of the Pacific Community Luke Street, Nabua Private Mail Bag, Suva, Fiji Tel: (679) 3370 733 Fax: (679) 3305 212 Email: SairusiB@spc.int

27. Mr Jalesi Mateboto	Community Forestry Officer	Secretariat of the Pacific Community Luke Street, Nabua Private Mail Bag, Suva, Fiji Tel: (679) 3370 733 ext 330 Fax: (679) 3370 021 Email: JalesiM@spc.int
GERMAN TECHNICAL COOPERATION (GTZ)		
28. Dr Hermann Fickinger	Team Leader/ Chief Adviser SPC/GTZ Regional Programme on Adaptation to Climate Change in the Pacific Island Region	House 10, Forum Secretariat Complex Ratu Sukuna Road, Suva, Fiji Tel: (679) 3305 983 Fax: (679) 3315 446 Email: hermann.fickinger@gtz.de
29. Mr Felix Ries	Professional Associate GTZ Young Professional Development Programme	Email: felix.ries@gtz.de
30. Ms Christine Fung	Land Use planning and Facilitation Specialist SPC/GTZ Regional Programme	Email : christinef@spc.int
RESOURCE PERSONS		
31. Dr Sean Weaver	Principal Carbon Partnership Ltd.	81 Severn St, Island Bay, Wellington, New Zealand Tel: Ph +64 4 383 6898 or +64 3 547 2295 Email: sean.weaver@carbon-partnership.com
32. Prof Dr Martin Herold	Remote Sensing Expert – GOFC-Gold	Tel: 149-3641-948887 Email: m.h@uni-jena.de
33. Dr Ian Payton	Carbon Inventory Expert – LandCare New Zealand	Tel: 6433219854 Email: paytoni@landcareresearch.co.nz
SECRETARIAT		
34. Ms Akanisi Waqa	Forestry Department	

Decision 4/CP.15

Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

The Conference of the Parties,

Recalling decisions 1/CP.13 and 2/CP.13,

Acknowledging the importance of reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries,

Noting the progress made by the Subsidiary Body for Scientific and Technological Advice in its programme of work on methodological issues related to a range of policy approaches and positive incentives,

Also noting the range of ongoing activities and cooperative efforts being undertaken by Parties and international organizations, in accordance with decision 2/CP.13, paragraphs 1, 2, 3 and 5,

Recognizing the need for full and effective engagement of indigenous peoples and local communities in, and the potential contribution of their knowledge to, monitoring and reporting of activities relating to decision 1/CP.13, paragraph 1 (b) (iii),

Recognizing the importance of promoting sustainable management of forests and co-benefits, including biodiversity, that may complement the aims and objectives of national forest programmes and relevant international conventions and agreements,

Noting experiences and lessons learned from ongoing activities and efforts in capacity-building, testing methodologies and monitoring approaches, and a range of policy approaches and positive incentives, including those guided by the indicative guidance contained in the annex to decision 2/CP.13,

1. *Requests* developing country Parties, on the basis of work conducted on the methodological issues set out in decision 2/CP.13, paragraphs 7 and 11, to take the following guidance into account for activities relating to decision 2/CP.13, and without prejudging any further relevant decisions of the Conference of the Parties, in particular those relating to measurement and reporting:

- (a) To identify drivers of deforestation and forest degradation resulting in emissions and also the means to address these;
- (b) To identify activities within the country that result in reduced emissions and increased removals, and stabilization of forest carbon stocks;
- (c) To use the most recent Intergovernmental Panel on Climate Change guidance and guidelines, as adopted or encouraged by the Conference of the Parties, as appropriate, as a basis for estimating anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes;

(d) To establish, according to national circumstances and capabilities, robust and transparent national forest¹ monitoring systems and, if appropriate, sub-national systems as part of national monitoring systems that:

- (i) Use a combination of remote sensing and ground-based forest carbon inventory approaches for estimating, as appropriate, anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes;
- (ii) Provide estimates that are transparent, consistent, as far as possible accurate, and that reduce uncertainties, taking into account national capabilities and capacities;
- (iii) Are transparent and their results are available and suitable for review as agreed by the Conference of the Parties;

2. *Recognizes* that further work may need to be undertaken by the Intergovernmental Panel on Climate Change, in accordance with any relevant decisions by the Conference of Parties;

3. *Encourages*, as appropriate, the development of guidance for effective engagement of indigenous peoples and local communities in monitoring and reporting;

4. *Encourages* all Parties in a position to do so to support and strengthen the capacities of developing countries to collect and access, analyse and interpret data, in order to develop estimates;

5. *Invites* Parties in a position to do so and relevant international organizations to enhance capacity-building in relation to using the guidance and guidelines referred to in paragraph 1 (c) above, taking into account the work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention;

6. *Requests* the secretariat, subject to availability of supplementary funding, to enhance coordination of the activities referred to in paragraph 5 above, in the context of existing initiatives;

7. *Recognizes* that developing country Parties in establishing forest reference emission levels and forest reference levels should do so transparently taking into account historic data, and adjust for national circumstances, in accordance with relevant decisions of the Conference of the Parties;

8. *Invites* Parties to share lessons learned and experiences gained in the application of the guidance referred to in paragraph 1 above and the annex to decision 2/CP.13 through the web platform on the UNFCCC website;

9. *Urges* relevant international organizations, non-governmental organizations and stakeholders to integrate and coordinate their efforts in order to avoid duplication and enhance synergy with regard to activities relating to decision 2/CP.13.

*9th plenary meeting
18–19 December 2009*

¹ Taking note of, if appropriate, the guidance on consistent representation of land in the Intergovernmental Panel on Climate Change *Good Practice Guidance for Land Use, Land-Use Change and Forestry*.

APPENDIX 5 – UNFCCC DECISION COP-16 (2010)

C. Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

Affirming that, in the context of the provision of adequate and predictable support to developing country Parties, Parties should collectively aim to slow, halt and reverse forest cover and carbon loss, according to national circumstances, consistent with the ultimate objective of the Convention, as stated in Article 2,

Also affirming the need to promote broad country participation in all phases described in paragraph 73 below, including through the provision of support that takes into account existing capacities,

68. *Encourages* all Parties to find effective ways to reduce the human pressure on forests that results in greenhouse gas emissions, including actions to address drivers of deforestation;

69. *Affirms* that the implementation of the activities referred to in paragraph 70 below should be carried out in accordance with annex I to this decision, and that the safeguards referred to in paragraph 2 of annex I to this decision should be promoted and supported;

70. *Encourages* developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances:

- (a) Reducing emissions from deforestation;
- (b) Reducing emissions from forest degradation;
- (c) Conservation of forest carbon stocks;
- (d) Sustainable management of forest;
- (e) Enhancement of forest carbon stocks;

71. *Requests* developing country Parties aiming to undertake activities referred to in paragraph 70 above, in the context of the provision of adequate and predictable support, including financial resources and technical and technological support to developing country Parties, in accordance with national circumstances and respective capabilities, to develop the following elements:

- (a) A national strategy or action plan;
- (b) A national forest reference emission level and/or forest reference level⁶ or, if appropriate, as an interim measure, subnational forest reference emission levels and/or forest reference levels, in accordance with national circumstances, and with provisions contained in decision 4/CP.15, and with any further elaboration of those provisions adopted by the Conference of the Parties;
- (c) A robust and transparent national forest monitoring system for the monitoring and reporting of the activities referred to in paragraph 70 above, with, if appropriate, subnational monitoring and reporting as an interim measure,⁷ in accordance with national

⁶ In accordance with national circumstances, national forest reference emission levels and/or forest reference levels could be a combination of subnational forest reference emissions levels and/or forest reference levels.

⁷ Including monitoring and reporting of emissions displacement at the national level, if appropriate, and reporting on how displacement of emissions is being addressed, and on the means to integrate subnational monitoring systems into a national monitoring system.

circumstances, and with the provisions contained in decision 4/CP.15, and with any further elaboration of those provisions agreed by the Conference of the Parties;

(d) A system for providing information on how the safeguards referred to in annex I to this decision are being addressed and respected throughout the implementation of the activities referred to in paragraph 70, while respecting sovereignty;

72. *Also requests* developing country Parties, when developing and implementing their national strategies or action plans, to address, inter alia, drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the safeguards identified in paragraph 2 of annex I to this decision, ensuring the full and effective participation of relevant stakeholders, inter alia, indigenous peoples and local communities;

73. *Decides* that the activities undertaken by Parties referred to in paragraph 70 above should be implemented in phases beginning with the development of national strategies or action plans, policies and measures, and capacity-building, followed by 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, and evolving into results-based actions that should be fully measured, reported and verified;

74. *Recognizes* that the implementation of the activities referred to in paragraph 70 above, including the choice of a starting phase as referred to in paragraph 73 above, depends on the specific national circumstances, capacities and capabilities of each developing country Party and the level of support received;

75. *Requests* the Subsidiary Body for Scientific and Technological Advice to develop a work programme on the matters referred to in annex II to this decision;

76. *Urges* Parties, in particular developed country Parties, to support, through multilateral and bilateral channels, the development of national strategies or action plans, policies and measures and capacity-building, followed by 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 including consideration of the safeguards referred to in paragraph 2 of annex I to this decision, taking into account the relevant provisions on finance including those relating to reporting on support;

77. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to explore financing options for the full implementation of the results-based actions⁸ referred to in paragraph 73 above, and to report on progress made, including any recommendations for draft decisions on this matter, to the Conference of the Parties at its seventeenth session;

78. *Also requests* Parties to ensure coordination of the activities referred to in paragraph 70 above, including of the related support, particularly at the national level;

79. *Invites* relevant international organizations and stakeholders to contribute to the activities referred to in paragraphs 70 and 78 above.

⁸ These actions require national monitoring systems.

Annex I

Guidance and safeguards for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

1. Activities referred to in paragraph 70 of this decision should:
 - (a) Contribute to the achievement of the objective set out in Article 2 of the Convention;
 - (b) Contribute to the fulfilment of the commitments set out in Article 4, paragraph 3, of the Convention;
 - (c) Be country-driven and be considered options available to Parties;
 - (d) Be consistent with the objective of environmental integrity and take into account the multiple functions of forests and other ecosystems;
 - (e) Be undertaken in accordance with national development priorities, objectives and circumstances and capabilities and should respect sovereignty;
 - (f) Be consistent with Parties' national sustainable development needs and goals;
 - (g) Be implemented in the context of sustainable development and reducing poverty, while responding to climate change;
 - (h) Be consistent with the adaptation needs of the country;
 - (i) Be supported by adequate and predictable financial and technology support, including support for capacity-building;
 - (j) Be results-based;
 - (k) Promote sustainable management of forests;
2. When undertaking activities referred to in paragraph 70 of this decision, the following safeguards should be promoted and supported:
 - (a) Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;
 - (b) Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
 - (c) Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
 - (d) The full and effective participation of relevant stakeholders, in particular, indigenous peoples and local communities, in actions referred to in paragraphs 70 and 72 of this decision;
 - (e) Actions are consistent with the conservation of natural forests and biological diversity, ensuring that actions referred to in paragraph 70 of this decision are not used for the conversion of natural forests, but are instead used to incentivize the protection and

conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits;¹

- (f) Actions to address the risks of reversals;
- (g) Actions to reduce displacement of emissions.

¹ Taking into account the need for sustainable livelihoods of indigenous peoples and local communities and their interdependence on forests in most countries, reflected in the United Nations Declaration on the Rights of Indigenous Peoples, as well as the International Mother Earth Day.

Annex II

Subsidiary Body for Scientific and Technological Advice work programme on policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

In the development of its work programme, the SBSTA is requested to:

- (a) Identify land use, land-use change and forestry activities in developing countries, in particular those that are linked to the drivers of deforestation and forest degradation, to identify the associated methodological issues to estimate emissions and removals resulting from these activities, and to assess their potential contribution to the mitigation of climate change, and report on the findings to the Conference of the Parties at its eighteenth session on the outcomes of the work referred to in this paragraph;
- (b) Develop modalities relating to paragraphs 71 (b) and (c), and guidance relating to paragraph 71 (d) of this decision, for consideration by the Conference of the Parties at its seventeenth session;
- (c) Develop as necessary, modalities for measuring, reporting and verifying anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, forest carbon stock and forest area changes resulting from the implementation of activities referred to in paragraph 70 of this decision, consistent with any guidance for measuring, reporting and verification of nationally appropriate mitigation actions by developing country Parties agreed by the Conference of the Parties, taking into account methodological guidance in accordance with decision 4/CP.15, for consideration by the Conference of the Parties at its seventeenth session;

APPENDIX 6 – CBD GLOBAL EXPERT WORKSHOP ON REDD (2010)



CBD



**Convention on
Biological Diversity**

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GLOBAL EXPERT WORKSHOP ON BIODIVERSITY BENEFITS OF REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION IN DEVELOPING COUNTRIES

Nairobi, 20-23 September 2010

OUTCOMES OF THE GLOBAL EXPERT WORKSHOP ON BIODIVERSITY BENEFITS OF REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION IN DEVELOPING COUNTRIES

I. CO-CHAIRS SUMMARY

1. If REDD-plus²⁸ is successful at reducing deforestation and forest degradation, and promoting forest conservation, it will have significant and unprecedented benefits for biodiversity.
2. A well designed REDD-plus mechanism also has the potential to deliver significant benefits to indigenous peoples and local communities.
3. Both biodiversity and the full and effective participation of indigenous peoples and local communities are necessary for the success of REDD-plus. The permanent storage of carbon depends on well-functioning and resilient forest ecosystems, and on indigenous and local community participation and ownership.
4. Multiple benefits of REDD-plus, such as biodiversity benefits and benefits for indigenous peoples and local communities, are already being realized in many countries that are taking REDD-plus activities forward, e.g. through mapping exercises and through developing integrated REDD-plus national plans.

²⁸ In this report, REDD-plus refers to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. As negotiations under the UNFCCC are ongoing, acronyms within the co-chairs summary are used for the purpose of shortening the text, without any attempt to pre-empt or pre-judge ongoing or future negotiations under the United Nations Framework Convention on Climate Change (UNFCCC). The Plurinational State of Bolivia expressed its reservation to the use of the acronym REDD-plus in the co-chairs summary and refers to this mechanism as 'forest-related activities', considering that a) forests are not only important for emission reduction but they also have other multiple benefits as expressed in the co-chairs' summary and b) in accordance with CBD decision IX/5 the mandate for this workshop refers to reducing emissions from deforestation and forest degradation in developing countries.

5. At this stage, the biggest risk to biodiversity and indigenous peoples and local communities from REDD-plus is that a well-designed REDD-plus mechanism is not agreed upon and successfully implemented.
6. Other specific risks for biodiversity identified by the meeting include:
- (a) The conversion of natural forests to plantations and other land uses of low biodiversity value and low resilience; and the introduction of growing of biofuel crops;
 - (b) Displacement of deforestation and forest degradation to areas of lower carbon value and high biodiversity value;
 - (c) Increased pressure on non-forest ecosystems with high biodiversity value;
 - (d) Afforestation in areas of high biodiversity value.
7. Other specific risks of REDD-plus for indigenous peoples and local communities include:
- (a) The loss of traditional territories and restriction of land and natural resource rights;
 - (b) Lack of tangible livelihood benefits to indigenous peoples and local communities and lack of equitable benefit sharing;
 - (c) Exclusion from designing and implementation of policies and measures;
 - (d) Loss of traditional ecological knowledge.
8. Safeguards, if designed and implemented appropriately, will reduce the risks and enhance the potential benefits of REDD-plus, for example by ensuring that conversion of natural forests is avoided, and ensuring full and effective participation of indigenous peoples and local communities based on the United Nations Declaration on the Rights of Indigenous Peoples, in particular the principle of free, prior and informed consent.
9. Action for multiple benefits needs to be taken at several levels. National governments play the key role in ensuring multiple benefits through the implementation of REDD-plus. National plans and national approaches benefit from the integration of climate change, biodiversity, and development objectives and strategies. This requires effective cross-sectoral coordination and harmonization of relevant policies and laws (agriculture, energy, environment, forests, biodiversity, and others), and integrated land use planning at the national scale.
10. Successful implementation of REDD-plus is dependent on transparent and effective national governance structures.
11. The CBD can support the implementation of REDD-plus through its programmes of work and its biodiversity monitoring efforts, including by:
- (a) Encouraging the Parties to maximize the benefits for biodiversity, for example through prioritizing the conservation of natural forests;
 - (b) Supporting the work of the UNFCCC to operationalize safeguards²⁹;
 - (c) Developing a framework for monitoring the impacts of REDD-plus on biodiversity.
12. Capacity building efforts across all levels founded on comprehensive national self-capacity needs assessments, as well as information sharing, are needed in order to achieve multiple benefits of REDD-plus, including through coordinated efforts of the members of the Collaborative Partnership on Forests and other relevant organizations.
13. Identifying and realizing multiple benefits can be supported through the application of:
- (a) Spatially explicit tools, such as maps and ecological gap analyses, to identify synergies and tradeoffs among climate change, biodiversity, and social issues;

²⁹ Without prejudging ongoing or future negotiations.

- (b) The results of the The Economics of Ecosystems and Biodiversity (TEEB) process;
- (c) Social and environmental standards for REDD-plus;
- (d) The recommendations of the CBD second Ad Hoc Technical Expert Group on Biodiversity and Climate Change.³⁰

14. Key research and development needs in the context of REDD-plus multiple benefits include:

- (a) Analysis of key drivers of biodiversity loss due to deforestation and forest degradation at the national and local level;
- (b) The conditions for effective and equitable distribution mechanisms;
- (c) Criteria and indicators for monitoring multiple benefits and safeguards;
- (d) Spatially explicit support tools/maps, including information on ecosystem services;
- (e) Socio-economic analyses of implementing REDD-plus considering the full value of forests and multiple benefits, recognizing that there are intrinsic values that cannot be monetarized;
- (f) Reviewing and improving national biodiversity strategies and action plans (NBSAPs) to reflect climate change issues;
- (g) Further collaborative work on the definitions on forests and forest types.

15. The workshop participants requested the Secretariat to make the workshop results available to the national focal points for the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change. To further advance the results of this meeting, the experts recommended that the CBD could explore possibilities for a technical workshop organized jointly by the CBD and UNFCCC Secretariat on how the CBD can support REDD-plus safeguards, without prejudice to the negotiations.

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Annex 1

CONSOLIDATED WORKING GROUP RESULTS

Topic 1: Biodiversity safeguards: identifying main risks associated with REDD-plus, and developing recommendations setting out how these risks can be avoided or mitigated.

Biodiversity risks

If REDD-plus is not agreed upon or designed and implemented in an effective way, the expected biodiversity benefits will not materialize. Unless REDD-plus also emphasizes the conservation of forests, it may deliver only very limited biodiversity benefits.

Risks related to lack of knowledge

Unless there is a good understanding of the terminology and concept of biodiversity among key decision makers, REDD-plus may not achieve biodiversity benefits.

³⁰ CBD Technical Series 41: *Connecting Biodiversity and Climate Change Mitigation and Adaptation*, available at www.cbd.int/ts

Risks related to carbon stock enhancement:

- Depending on how “carbon stock enhancement” is defined and implemented, this could incentivize the use of exotic tree species or new fast-growing species, some of which may become invasive or could have other negative impacts for biodiversity.
- Some of the activities eligible under REDD-plus, if planned inappropriately, could impact negatively on intact natural forest and their biodiversity.

Risks related to forest management

- If not planned appropriately, forest management activities could result in negative consequences for natural ecosystems and their functions, and may lead to the future conversion of natural forests into mono-culture/plantations

Risks related to conflicting policies:

- Without comprehensive land use planning, REDD-plus may not be successful in delivering the expected biodiversity benefits, because there could be diverging priorities relating to carbon and biodiversity objectives.
- Policies designed to place an economic value on forests, especially on carbon, may not capture the biodiversity value of forests.

Risks related to leakage:

- REDD-plus may result in increased land pressure (for timber, agriculture, firewood, etc.), a shift of deforestation or forest degradation to areas of low carbon, but of high biodiversity value or non-forested ecosystems, negatively impacting the biodiversity of those systems, within or between countries.

Risk related to definitions and scope of REDD-plus:

- If REDD-plus does not incentivize the conservation of standing forests, countries with low deforestation rates may not benefit from the implementation of the mechanism; on the contrary, they could start experiencing higher deforestation and associated biodiversity loss.
- If net deforestation rates are reported, these could mask deforestation of old-growth forest, negatively affecting biodiversity.
- Without a clearer classification of forests (e.g., natural, modified, plantations of exotic species) under the UNFCCC or within national REDD-plus strategies, REDD-plus might incentivize the expansion of biofuel production, with negative impacts on biodiversity.

Risk related to overburdening the UNFCCC REDD-plus mechanism with biodiversity requirements:

- There is a risk of overburdening the REDD-plus mechanism if biodiversity issues related to baselines and monitoring processes are seen as an obstacle for implementation.

Biodiversity recommendations

Carbon stock enhancement:

- Afforestation /reforestation activities could help conserve biodiversity if they, for example, convert only degraded land or ecosystems largely composed of exotic species, include native tree species, consider the invasiveness of non-natives, and are strategically located within the landscape to enhance connectivity.
- A MRV system for biodiversity safeguards would help countries in setting up national REDD strategies that consider these threats.
- Countries need to carefully research the potential invasiveness of species (as they are doing now) before introducing them into afforestation activities.

Conflicting policies:

- Policies that integrate and promote the conservation and enhanced sequestration of soil carbon, including in peatlands and other wetlands as well as in grasslands and savannahs, can contribute to climate change mitigation and be beneficial for biodiversity and ecosystem services.
- REDD planning at the national level should consider the harmonisation of relevant policies amongst sectors such as agriculture / energy / environment / infrastructure / wildlife, along with REDD in order to promote synergies and avoid overlap and conflicts that will lead to negative effects for biodiversity.
- There is need for balanced and coordinated policies between local, regional and national level
- Need for clear linkages between the programmes of work under the Convention on Biological Diversity on protected areas and forest biodiversity and REDD at the national level.

Leakage:

- Countries should pay attention to the pressures on other ecosystem types that could result from successfully maintaining forests.
- Inter-ecosystem leakage could be avoided by comprehensive land use planning that does not only consider forest but also non-forest ecosystems and related biodiversity objectives.
- The design of the REDD mechanism should be in such a way that it supports or contributes to the conservation of the whole range of ecosystem types and associated values.

Definitions and scope of REDD-plus:

- Establishing reference emission levels in a way that allows countries with high forest cover but low deforestation rates to participate in REDD-plus would result in enhanced biodiversity benefits.
- REDD-plus needs to incentivize the maintenance of existing forest cover.
- There is a need for countries to establish more precise definitions of forest and different forest types and other ecosystems, e.g., the FAO definitions for primary forest and other forest types, in order to avoid the conversion of natural forests into plantations.
- At the international level, there is the need for minimum criteria to define different forest types.

Monitoring of biodiversity:

- The CBD includes within its new framework of targets and indicators an indicator of the impacts of REDD-plus on biodiversity.
- Achievement of biodiversity objectives needs to be measured and reported with appropriate indicators. Clear criteria, method, etc are required and that should result in a monitoring framework or REDD-plus standards developed to ensure social and environmental benefits
- Countries could create synergies between biodiversity monitoring and ongoing MRV for carbon.

Awareness raising, research needs and capacity building:

- Development of relevant information, economic and trade-off analysis and mapping tools in order to help policy makers take informed decisions regarding REDD-plus and its multiple benefits.

Topic 2: Optimizing multiple benefits: identifying main opportunities for synergies between the implementation of REDD-plus and the CBD programme of work on forest biodiversity; identifying the tools and processes needed to achieve and optimize these synergies; and identifying how these tools and processes could be improved.

Recommendations to optimize multiple benefits:

- With its post-2010 Strategic Plan, the CBD should establish a target on monitoring of the impacts of REDD-plus on forest biodiversity with specific indicators. The CBD should include biodiversity safeguards for REDD-plus under its programme of work on forest biodiversity.
- National plans and policies, such as REDD roadmaps, strategies and NBSAPs, should mainstream climate change (REDD-plus) and biodiversity.
- A process should be promoted between CBD and UNFCCC to raise the need and opportunity to link mechanisms and recommendations. In addition national MEA focal points should have formal means of collaboration.
- Biodiversity hotspots and areas with high carbon values should be identified through land use planning processes. This planning should ensure protection of high biodiversity values, in particular primary forests, reduced fragmentation and/or increases connectivity. In addition, fragile areas should be identified and protected. Tools that can support this planning, includes spatial analysis.
- Capacity-building should be provided on the role of biodiversity and associated benefits within REDD-plus.
- Increase awareness-raising efforts, informing decision-makers about the linkages between biodiversity, climate change and national development aspirations, including that REDD-plus ensures ecological stability and enhances ecosystem services.
- CBD COP10 should recognize the importance of REDD-plus for forest biodiversity conservation.
- The CBD should consider addressing REDD-plus not only through its PoW on forest biodiversity but also through other programmes since some of the drivers of deforestation are outside the forestry sector.
- Consider available environmental and social standards for REDD-plus design and implementation.
- Incorporate the economic values of forests ecosystem services in national REDD-plus communication and strategies (research need at national level).
- Develop guidance for transparent financial mechanisms and benefit sharing arrangements.
- Consider national and sub-national screening criteria for REDD-plus projects/initiatives to include biodiversity and ILC criteria. Biodiversity and ILC selection criteria should be used when identifying priority areas for REDD-plus piloting.
- There should be a robust monitoring and reporting system for multiple benefits and safeguards, as well as methods for the integration of biodiversity concerns in the development of reference levels including in situ methodologies of species inventory and monitoring.

- The CBD through its programme of work on forest biodiversity can support the implementation of REDD-plus, in particular with respect to maximising the benefits for forest biodiversity conservation.
- The CBD could help the UNFCCC in operationalizing the safeguards without prejudging the outcome of the REDD-plus agreement.
- Promote biodiversity as a central pillar of achieving REDD-plus

Topic 3: Indigenous and local community benefits: identifying risks to indigenous and local communities, and developing recommendations how these risks can be avoided or mitigated; identifying the main opportunities for achieving benefits from REDD-plus for indigenous and local communities, and developing recommendations how these benefits can be maximized. Under this point, participants are asked to consider specifically articles 8(j) and 10 (c) of the Convention on Biological Diversity.

Risks and recommendations on indigenous and local communities

Potential risks to indigenous and local communities

- This mechanism could lead to a loss of traditional territories and a restriction of land use, ecosystem services rights and sovereignty, including eviction of ILCs from their ancestral land.
- By monetizing forest carbon, this mechanism might increase the financial value of forests and trigger a land grab by governments and private investors, taking forests away from ILCs.
- The mechanism could negatively impact on the traditional livelihoods and endanger access and benefit sharing (ABS).
- May deny access to environmental services like spiritual, traditional knowledge and ancestral medicines, among others.
- The mechanism could affect and interfere their rights to full and effective participation in the development in their lands and territories.
- This mechanism could not achieved its objectives if there is no full support of ILC and the rights of the ILC are not recognized in the whole process, from planning to implementation processes.
- Indigenous cultural values may be threatened by external influences and pressures of livelihood and lifestyles change.

Recommendations

- ILC are likely to benefit more from this mechanism where they own their lands, where there is the principle of free, prior and informed consent and where their identities and cultural practices are recognized and they have space to participate in policy-making processes involving local stakeholders, in particular women.
- The mechanism need to establish a framework for access and benefit-sharing that provides for equitable benefit-sharing between key stakeholders involved in the process and also within the communities receiving the benefits.
- The mechanism should take into account spiritual and traditional values of forest resources for ILCs.
- Full and effective participation of local and indigenous communities in accordance with the United Nations Declaration on the Rights of Indigenous Peoples, in particular, indigenous peoples rights to free, prior and informed consent (FPIC).
- National Governments could make use of existing institutions of ILC or institutions that ILC recognize and work with in order to equitably distribute benefits among ILC.

Opportunities

- The REDD-plus mechanism should directly compensate indigenous and local communities to prevent a loss of indigenous and local communities' property rights over forests that could result from pressure to sell forest.
- Political will should be strengthened to increase the participation of indigenous and local communities in land-use planning.

APPENDIX 7 – CARBON MARKET CASE STUDY: IMPROVED FOREST MANAGEMENT

This project is about trying to help Maori owners of indigenous forest in New Zealand to sell carbon instead of timber to generate a revenue stream from their forests. All tall indigenous forests are excluded from the carbon credit instruments developed by the New Zealand government (the NZ ETS, and the Permanent Forest Sink Initiative - PFSI) during the Kyoto Protocol First Commitment Period (KPCP1) 2008-2012. This is because New Zealand elected to not undertake Article 3.4 of the Kyoto Protocol relating to forest management of pre-1990 forests, and all tall indigenous forests were established prior to 1990. As such, carbon trading through the government system requires eligible forests to have been established after December 31st 1989. This means that Maori owners of tall indigenous forest currently have no option for carbon trading in the government-based system and/or the Kyoto Protocol.

But there is an alternative to the government carbon trading system in New Zealand, and this comes in the form of the voluntary carbon market. The voluntary carbon market is also a carbon trading option for developing countries seeking to undertake REDD activities. To be eligible for carbon trading in the voluntary carbon market, a forest carbon project needs to be ineligible for carbon trading in the New Zealand government carbon trading system. Hence, Maori owners of tall indigenous forest still have carbon trading options – at least *in principle*.

This feasibility study involved developing a carbon project to the point at which it would be almost ready to bring to market. This involved developing a carbon project methodology (Weaver et al 2010a) suitable to the forests in question, and then using this methodology as the basis for calculating the volume of carbon credits that the case study project might expect to sell (Weaver et al 2010b).

The outcome of this case study (see Weaver and Hewitt 2010) showed that carbon credits generated through the voluntary carbon market can compete with timber harvesting when comparing these options on a purely financial basis (and using conservative carbon price estimates). Whereas carbon credit sales are likely to generate slightly less annual net income per hectare than timber, the carbon revenues are still the same order of magnitude as timber revenues for landowners. Furthermore, carbon credits can be forward sold in a futures market (e.g. transacting 50 years of carbon up front), which reduces financial risk to the seller. This is the key advantage carbon credits have over timber harvesting, particularly when the forest owners lack the capital to command a position higher up the timber value chain.

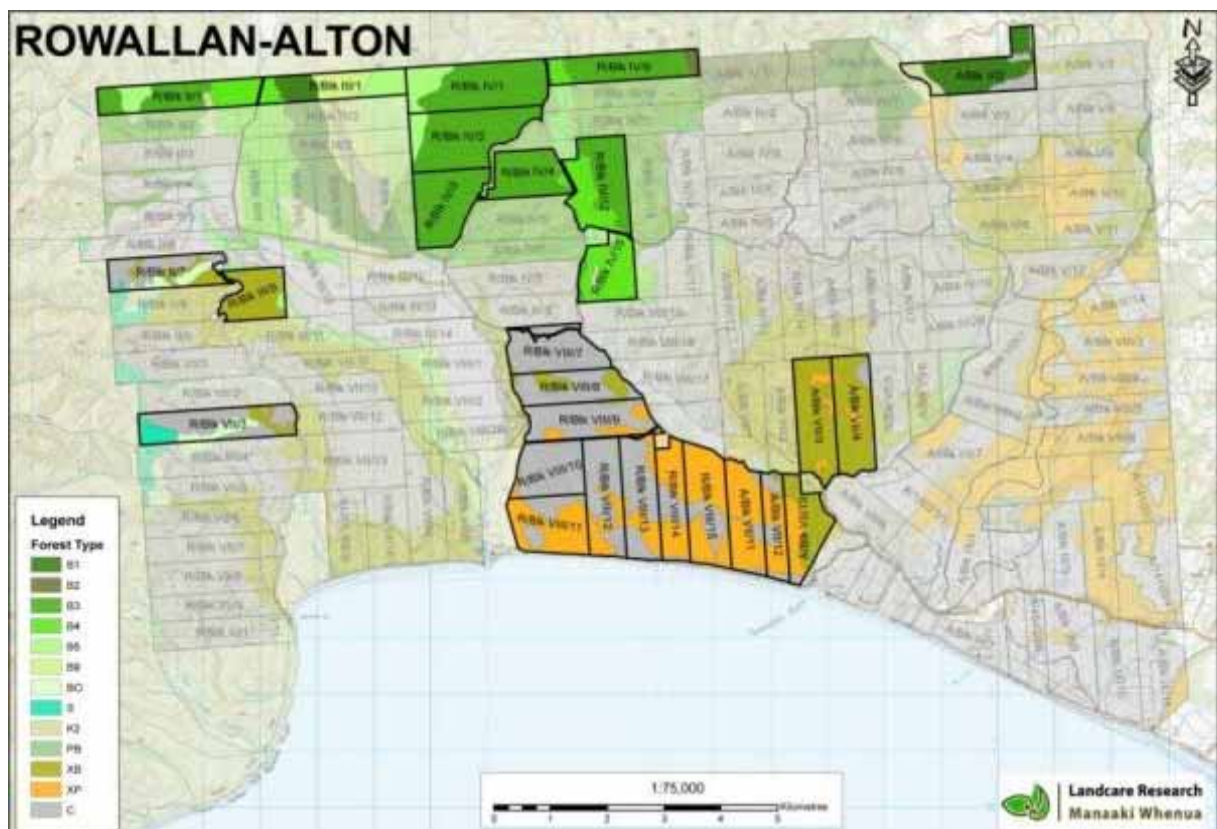
Case Study Example

The purpose of this project was to test the commercial feasibility of a voluntary carbon market project in non-Kyoto indigenous forest on Maori-owned land in Western Southland.

A map of New Zealand with an orange arrow pointing to the southern tip of the South Island, indicating the project location in western Southland. The map shows major cities and regions across both islands.

Figure 1: Project location in western Southland, New Zealand

Figure 2: Land Parcels Comprising the 'Rowallan-Alton Carbon Project'



Given the anticipated complexities of this task and the possibility of a carbon project not being commercially viable for these forests, a fallback position was also anticipated in the form of a Payment for Ecosystem Services (PES) project. In the event that a PES project approach is pursued, it would be based on the methodology used for the carbon project but instead of selling carbon it would aim to sell a forest conservation outcome to a corporate sponsor.

The baseline (business-as-usual) activity for these forests is low impact selective logging, because no other type of logging activity is permitted under New Zealand forestry laws and regulations. Such low levels of baseline timber harvesting would make it challenging for a carbon project to achieve commercial viability.

In order to test the commercial feasibility of a voluntary carbon project on these Maori lands it was necessary to undertake the following:

1. **Forests:** Define an aggregation of potentially eligible forest lands of a scale that would *prima facie* be sufficient for meeting the demands of a carbon project (i.e. in terms of transaction costs), and gain approval by the owners of this land to prepare a proposal for a carbon project.
2. **Carbon Product:** Define suitable carbon product types and associated carbon finance options associated with those product types. These product types include the kind of carbon unit to be generated and the associated carbon market standard.
3. **Methodology:** Develop a project methodology in accordance with a carbon market standard. This involves selecting an existing methodology (approved or soon to be approved by an international quality assurance standard) and adapting it to a context suitable for a) this project case study, and b) extension to other Maori indigenous forest lands throughout New Zealand.
4. **PDD:** Populate the methodology with data from the SILNA forest case study.
5. **Carbon Revenues:** Calculate the potential carbon revenues capable of being generated from the case study forests should a carbon project proceed, and on the basis of the different carbon product scenarios (i.e. under different standards). This calculation of carbon revenues under different scenarios takes into account the costs of bringing a carbon project to market (e.g. project development and transaction costs) for the different standards.
6. **Scale:** Should the benefit-cost analysis prove unfavourable for a carbon project of this scale, the next step would be to estimate how large a project would need to be (in terms of the area of eligible forest lands) in order to attain commercial viability for this project type as a function of scale.

7. **PES:** Should a carbon project be deemed unviable for this particular aggregation of lands, then develop a 'Payment for Ecosystem Services' (PES) project for these forests with the view to seeking corporate sponsorship to achieve the protection of these forests.
8. **Strategic Considerations:** The options for progressing this initiative need to be presented to the funder and the forest owners.

The summary findings arising from each of the seven steps above are:

1. **Forests:** The aggregation of eligible lands comprised 1,425 hectares of indigenous forest-land made up from 21 land parcels in the Rowallan-Alton area of Western Southland. The owners of the land comprise two groups:
 - a. The Rowallan-Alton Incorporation – an incorporation of Maori owners, and
 - b. A group of Maori forest blocks managed on behalf of the owners by the Office of the Maori Trustee.
2. **Carbon Product:** The most suitable international voluntary carbon market product selected for this project were:
 - a. VCU - Voluntary Carbon Units issued and quality assured by the Voluntary Carbon Standard³¹ (VCS), or
 - b. VERs – Verified Emission Reductions issued by Markit Environmental Registry and quality assured by the ISO 14064-2 standard, with the further option of certifying the community and biodiversity co-benefits with the Climate Community and Biodiversity Standard (CCB).

These two options are available to the forest owners should they choose to pursue a carbon project. They differ in the project development and transaction costs associated with bringing them to market, and also differ in the likely value of the carbon units and associated carbon revenues generated from a carbon project.

The lowest cost path to market would involve pursuing option b in 2. above: the VER/ISO path which would likely cost approximately NZ\$30,000 for project validation/auditing/certifying by ISO, whereas the VCS path may cost as much as NZ\$90,000 in transaction costs.

3. **Methodology:** A New Zealand-specific methodology was developed for the project and was based on the Voluntary Carbon Standard (VCS) and adapted for New

³¹ The Voluntary Carbon Standard is the largest international carbon market standard commanding about 50% of all international voluntary carbon market transactions.

Zealand conditions and simplified to lower project development and transaction costs. The methodology type is: Improved Forest Management (IFM), Conversion of Logged to Protected Forest (LtPF).

This methodology was based on the Green Collar IFM-LtPF VCS methodology (soon to be approved by the Voluntary Carbon Standard), the VCS Standard, VCS guidance documents, and VCS methodological tools as guiding documents. It was also closely aligned with the existing New Zealand forest carbon accounting methodologies already developed for compliance carbon accounting under the Kyoto Protocol. This New Zealand-specific methodology is applicable to any voluntary carbon project in similar indigenous forests in New Zealand and could be incorporated into a national scheme to protect indigenous forests ineligible under the Emissions Trading Scheme or the Permanent Forest Sinks Initiative.

4. **PDD:** The data from the project forests was populated into the methodology in the form of a Project Description Document (PDD) in order to:
 - a. Define the eligible forest area (1,425ha).
 - b. Determine the project scope in terms of carbon accounting.
 - c. Determine the baseline (business as usual) scenario carbon stocks and stock change. The baseline scenario was determined as timber harvesting under a sustainable forest management plan at a rate of extraction that is commercially viable under current prices.
 - d. Determine the project scenario (forest protection) carbon benefits. The project scenario determined the annual carbon benefits accruing to the project to be 6849 tCO₂/yr. The project period was set provisionally at 50 years, but which could be changed (e.g. to 100 years) if the owners so choose.
 - e. Demonstrate additionality (i.e. show that forest protection would not happen anyway). The project is judged to meet the VCS additionality requirements.
 - f. Define a monitoring regime. The monitoring regime involves a 5 yearly assessment of the project in terms of confirmation of no change in the project boundaries, and no commercial timber harvesting.

NB: further work is needed to complete the PDD (tasks for the next phase of this project).

5. **Carbon Revenues:** The potential gross carbon revenues arising from this cases study are estimated for the ISO certification path and assuming it can secure a buyer/s:
 - a. Scenario 1: 342,450 tCO₂ benefits @ NZ\$5/tCO₂ forward sold for a 50 year project = NZ\$1.71 million.
 - b. Scenario 2: 342,450 tCO₂ benefits @ NZ\$10/tCO₂ forward sold for a 50 year project = NZ\$3.42 million.
 - c. Scenario 3: 684,900 tCO₂ benefits @ NZ\$5/tCO₂ forward sold for a 100 year project = NZ\$3.43 million.

- d. Scenario 4: 684,900 tCO₂ benefits @ NZ\$10/tCO₂ forward sold for a 100 year project = NZ\$6.85 million.

When comparing potential carbon revenues with potential timber revenues, it is clear that carbon revenues are similar in scale to stumpage revenues under a timber-harvesting path. The advantage of carbon over stumpage relates to the fact that carbon can be forward sold thereby lowering financial risk to forest owners.

This showed that the project would be potentially commercially viable for carbon trading should the forest owners choose to proceed, provided it can secure a buyer and an acceptable reserve price.

This also indicates that it may be commercially viable to undertake voluntary carbon projects in a range of indigenous forests on Maori owned land elsewhere in New Zealand.

- 6. **Scale:** The economic information arising from this case study indicate that it is potentially commercially viable to transact carbon in lieu of timber at a scale of 1,425ha. The NZ-specific methodology developed in this project provides for a programmatic approach, which allows a single project to be validated (e.g. NZ\$30k auditing/validation cost) but then grow in size as new lands are added to the programme through time. This would allow other Maori forest owners to opt into this programme without having to repeat the cost of project validation.
- 7. **PES:** A 'Payment for Ecosystem Services' (PES) project may not be necessary given that carbon trading appears to be commercially feasible. Alternatively, a PES transaction could be considered should the resource owners seek to certify the project under the Climate Community and Biodiversity (CCB) standard, which certifies the biodiversity and community co-benefits but not the carbon component of the project. The key here is securing a buyer willing to pay a reserve price for a product that contains non-certified carbon, packaged with certified co-benefits.

The PES methodology is the same as the carbon methodology developed and used in this case study, but would produce a PDD that would be sent to a third party to certify the biodiversity and community co-benefits, or sent to a potential buyer seeking a partnership. Such a path would require further work to document the biodiversity and community co-benefits of the project in greater detail than contained in the current PDD.

- 8. **Strategic Considerations:** The carbon project option appears to be viable on the basis of the information presented in the PDD. A carbon project on these lands would also incorporate added value from biodiversity and Maori cultural and socio-

economic co-benefits. These co-benefits need to be further documented in the PDD. There is also an option to certify these co-benefits (e.g. through certification by the Climate Community and Biodiversity standard) but this would add to the project transaction costs (e.g. an additional NZ\$20-30k). Self certified but well documented and monitored biodiversity and cultural co-benefits would still add value to the carbon and may enable a higher carbon price per tonne than carbon sold without documenting these co-benefits.

The New Zealand-specific IFM-LtPF methodology developed in this project provides for a programmatic carbon project/programme to be rolled out. This option would enable the forests subject to this project to form the initial core of a programme generating a combination of carbon, biodiversity and Maori cultural co-benefits. Here, the project validation cost of NZ\$30,000 would benefit all Maori forest owners who elected to opt into this programme. Because the methodology is applicable to any New Zealand forest land, it could also be used for carbon projects on non-Maori lands. For such lands to be incorporated into a carbon project under this methodology they would, however, need to establish a separate project or programme and would incur their own project/programme validation cost (i.e. NZ\$30,000).

Conclusion & Relevance to Pacific Island REDD

This Improved Forest Management (IFM) case study was undertaken against a backdrop of

- a. Low baseline emissions (from sustainable forest management – low intensity selective logging), and
- b. Covering a relatively small total area (less than 2,000ha) made up of an aggregation of even smaller forest areas (approximately 100ha each).

The fact that the forecast net carbon revenues arising from this project are in the same order of magnitude as net revenues from timber harvesting demonstrates that small community scale carbon projects are possible in the Pacific Islands. This is particularly relevant given the fact that baseline emissions in IFM forest carbon projects in the Pacific Islands are likely to be significantly higher due to the legal sanction and common practice to harvest timber at much higher rates than the low levels expected of sustainable forest management regulations in New Zealand.

The Improved Forest Management methodology is also particularly relevant to Pacific Island countries where a great deal of forest sector emissions arises from forest degradation rather than deforestation. For this reason, the IFM methodology rather than a REDD methodology is likely to be more relevant to the majority of indigenous forest carbon project scenarios in Pacific Island countries. As such, the methodology developed, and the path to market defined in this in this case study could be adapted to Pacific Island country contexts

relatively easily in the form of pilot projects in REDD+. The value of using this methodology also relates to the fact that it only needs to be modified slightly to suit Pacific Island contexts – rather than having to go to the trouble of developing a new methodology from scratch.