


UN COLLABORATIVE PROGRAMME ON REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION IN DEVELOPING COUNTRIES
NATIONAL PROGRAMME DOCUMENT

Cover Page

Country: Papua New Guinea

Programme Title: UN-REDD PNG National Programme

Programme Outcome(s): UNCP Action Plan 2008-2012 Outcome "*Sustainable Livelihoods and Population: By 2012, rural communities in selected provinces of each region use improved sustainable livelihood practices*", particularly Intermediate Outcome "*Communities apply national policies and regulatory frameworks to implement environmentally sustainable livelihood opportunities, including community based ecotourism, non-timber forest products, sustainable agriculture and ecoforestry*."

Programme Duration: 36 months	
Anticipated start/end dates:	1 January 2011 – 31 December 2013
Fund Management Option(s): Pass Through	
Managing or Administrative Agent: UNDP MDTF Office	

Total estimated budget:*	$6,388,884
Out of which:	
1. Funded Budget:	$6,388,884
2. Unfunded budget:	_____

* Total estimated budget includes both programme costs and indirect support costs

Sources of funded budget:

Donor UN-REDD Multi-Donor Trust Fund

Names and signatures of national counterparts and participating UN organizations

This national programme document should be signed by the relevant national coordinating authorities. By signing this national programme document, all signatories – national coordinating authorities and UN organizations - assume full responsibility to achieve results identified with each of them as shown in Table 1 and detailed in annual work plans.

UN organizations	**National Coordinating Authorities**
David McLachlan-Karr, *UNDP* *Signature* *Date & Seal*	Ruby Zarriga Acting Secretary, Department of National Planning & Monitoring *Signature* *Date & Seal*
Jose Antonio Prado, *FAO* *Signature* *Date & Seal*	
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Contents


List of Acronyms

BAU	Business as usual
CCDS	Papua New Guinea's Climate-Compatible Development Strategy
DAL	Department of Agriculture and Livestock
DEC	Department of Environment and Conservation
DLPP	Department of Lands and Physical Planning
FAD	Forest Authority Database
FAO	Food and Agricultural Organization
FCA	Forest Clearance Authority
FCC	Joint Government of Papua New Guinea – Development Partner Forum on Climate Change
FCCFA	PNGFA's Forest and Climate Change Framework for Action 2009-2015
FIMS	Forest Inventory Mapping System
FIPS	Forest Inventory Processing System
FLEGT	Forest Law Enforcement, Governance and Trade mechanism
FMA	Forest Management Agreement
FPIC	Free, prior and informed consent
FRI	Papua New Guinea Forest Research Institute
GEF	Global Environment Facility
GHG	Greenhouse gas
GIS	Geographic Information System
GoPNG	Government of Papua New Guinea
HDI	Human Development Index
IFCI	Australia's International Forest Carbon Initiative
IIED	International Institute for Environment and Development
ILG	Incorporated Land Group
IPCC	Intergovernmental panel on climate change
ITTO	International Tropical Timber Organization
JICA	Japan International Cooperation Agency
LNG	Liquefied natural gas
LULUCF	Land use, land-use change and forestry
MDTF	Multi-Donor Trust Fund
MRV	Measurement, Reporting and Verification
MTDP	PNG's Medium Term Development Plan
NADP	National Agricultural Development Program

NCCC	National Climate Change Committee
NEC	National Executive Council
NFDP	National Forest Development Program
NP	National Programme
NPD	National Programme Document
NPMF	National Programme Monitoring Framework
OCCD	Office of Climate Change and Development in Papua New Guinea
OLPLLG	Organic Law on Provincial and Local Level Governments
PEB	Programme Executive Board
PGK	Papua New Guinean kina (1 kina = 0.39 USD)
PMC	Programme Management Group/Committee
PMU	Programme Management Unit
PNG	Papua New Guinea
PNGFA	Papua New Guinea Forest Authority
PSP	Permanent sample plot (for biomass measurements)
QA	Quality assurance
QC	Quality control
QWP	Quarterly work plan
REL	Reference Emission Levels
RIL	Reduced impact logging
RL	Reference Levels
SLMS	Satellite Land Monitoring System
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNITECH	PNG University of Technology
UN-REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
UPNG	University of Papua New Guinea

1. Executive Summary

The UN-REDD Programme was set up in 2008 to assist tropical forest countries in establishing a fair, equitable and transparent REDD+ regime. The proposed National Programme (NP) for PNG builds on the 2009 draft NP which has received approval in principle by the Policy Board. It aims to support the Government of PNG to further progress its efforts towards REDD+ readiness and places heavy emphasis on the development of a Measurement, Reporting and Verification (MRV) system for PNG, as an important complement to PNG's domestic climate-change efforts. MRV systems track changes in carbon stock resulting from land-use change, and as such, are a fundamental prerequisite for any pay-for-performance REDD+ programme. The proposed NP has to be seen in the context of PNG's unique national circumstances, including geography, culture and traditions, language, information and communication and land tenure systems, and the progress achieved to date on dealing with the effects of climate change and REDD+.

PNG has taken a global lead in seeking to combat climate change, particularly by proposing measures to realise the carbon abatement opportunity offered by preserving and sustainably managing tropical forests, i.e. by introducing the concept of REDD+ into international negotiations. Domestically, PNG is also committed to mitigating greenhouse gas emissions. The country's Vision 2050 envisages low-carbon economic development, aiming to increase per capita GDP by a factor of three by 2030, while maintaining an aspirational goal of net carbon neutrality by 2050.

In order to achieve this goal, PNG has made significant efforts in the past year to further the domestic agenda on climate change:

- The newly established **Office of Climate Change and Development** (OCCD) provides the institutional structure to coordinate action against climate change in PNG. It supports the whole-of-government **National Climate Change Committee** in steering climate change policy and reports directly to the Prime Minister.
- A **Climate-Compatible Development Strategy** (CCDS) sets out the strategic direction for PNG's action against climate change domestically, with a strong focus on REDD+. The main elements of the draft CCDS and the process for multi-stakeholder consultation have been endorsed by the National Executive Council (NEC). The CCDS is envisaged to be finalised and released in its final form later this year.
- An **Interim Action Plan** sets out the immediate priorities for action over the next 6-12 months while the CCDS is being finalized.

This progress frames the efforts over the coming months and years, during which GoPNG will move to implement climate-compatible development, specifically including the following actions related to REDD+ readiness:

- Mitigation from REDD+ activities needs to be incorporated into national development planning; sectoral policies and initiatives will have to be reviewed to ensure they are climate-compatible.
- Further research and analysis will be required in some areas, such as developing a comprehensive greenhouse gas inventory.
- REDD+ activities will require the development of new capacities in the institutions involved.
- Pilot programs will be required to enhance the knowledge base, identify the most effective institutional arrangements, test the new policies and build capacity.
- A large-scale consultation exercise will need to be launched to involve local communities and landowners in critical elements of the strategy, especially arrangements for benefit sharing.

- A Measurement, Reporting and Verification (MRV) system, fund disbursement mechanism and benefit-sharing models that ensure benefits accrue equitably to resource owners will have to be developed.

This NP will be one important element of an integrated REDD+ readiness strategy and contribute to preparing PNG for a REDD+ mechanism. The programme's objective is to ensure that by 2013, PNG has an operational Measurement, Reporting and Verification system that enables the country's participation in international REDD+ systems to protect its environmental resources and contribute to sustainable livelihood practices of rural communities. This objective will be achieved through the following outcomes:

Outcome 1 – Readiness Management Arrangements in Place

- Management arrangements between GoPNG and stakeholders are strengthened
- National Programme implementation is strengthened

Outcome 2 – National MRV system developed

- National REDD+ Information system developed
- Satellite Forest Land Monitoring system set up
- Multipurpose national forest carbon inventory developed
- National GHG Inventory for REDD+ established
- Technical advice, capacity building and implementation support provided

Outcome 3 – Establishment of Reference Emission Levels (REL) and Reference Levels (RL) supported

- Historical drivers of deforestation assessed
- National circumstances assessed

Outcome 4 – Monitoring of abatement concepts supported

- Capacity for monitoring and implementation of priority abatement levers developed

Outcome 5 – Stakeholders engaged in PNG's REDD readiness process

- Framework for stakeholder engagement processes in place

2. Situation analysis

2.1. PNG Context

Papua New Guinea is the largest of the Pacific Island nations, both in terms of population, estimated at some 6.1 million, and in terms of land mass, covering approximately 460,000 square kilometres. Around 87 percent of the population lives in rural areas of Papua New Guinea's varied and rugged terrain that supports an extraordinary range of ecosystems and biodiversity, most of which are not accessible by road. The country has a rich and unique cultural and ethnic diversity, with some 830 languages spoken by a population distributed over the mainland and the many islands. The population is forecast to grow to more than 11 million by 2050. Currently 40 percent of the population is under the age of 18.

The country's level of human development remains low and has, in some areas, deteriorated over the recent years. In 2008, Papua New Guinea's Human Development Index (HDI) ranked at 149 out of the 179 countries and territories surveyed.

A large part of the rural population, and to a lesser extent, the urban population relies for their livelihoods on forest exploitation, fishing, hunting, and subsistence agriculture. Weak infrastructure, weak social service delivery mechanisms, marketing difficulties as well as low government and civil society capacity constrain possibilities to improve standards of living.[1]

2.2. The forest sector in PNG

Forest inventory and deforestation and forest degradation

Papua New Guinea (PNG) has one of the most significant areas of largely-intact tropical forest in the world, although these forests appear to be facing acute and imminent threats. Forests are also a vital resource for the local population particularly in the remote rural areas of PNG. These forests provide food, fibre, building materials, and support a variety of wildlife, ecosystem services such as carbon sequestration, watershed protection, water supply, soil stability and fertility.

Nevertheless, forest cover data, commercial timber stocks, rate of deforestation and relative contributions of the drivers of deforestation are all subject to some uncertainty and much debate among academics and NGOs interested in forest cover change in PNG.

The Papua New Guinea Forest Authority (PNGFA) estimates that approximately 60 percent of the total area of the country is covered by natural forests, of which 52 percent are considered *production forests* (for timber and other products), and 48 percent are for conservation (not for timber extraction due to inaccessibility or ecological constraints).

There is a long history of debate regarding the forestry sector in PNG in numerous reviews, independent audits and studies of the forestry sector, e.g.:

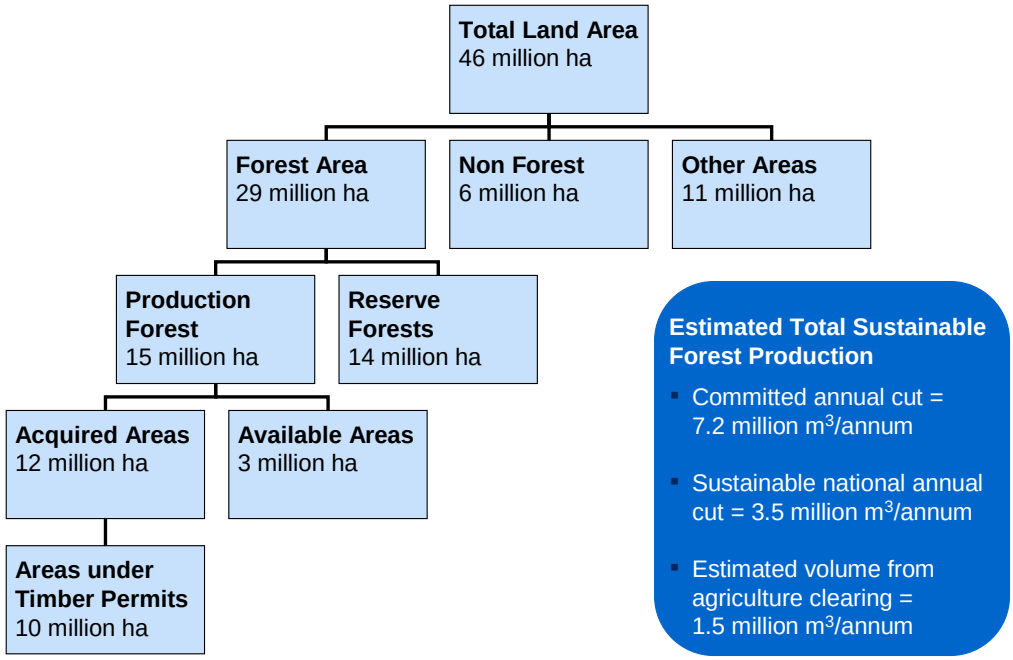
- IIED 1998 Country Study
- IIED 2001 Report edited by Colin Hunt
- PNG Forest Industry Association analysis 2006

An official assessment of the Forest Resource Base by PNGFA indicates that about 29 million hectares of land are forested of which 15 million hectares are classified as production forest having potentially high quality hardwoods species suitable for commercial development.[2] The remaining 14 million hectares are classified as Reserve Forests (Figure 1).

[1] This section is based on the Situation Analysis in the UN Country Programme Action Plan.

[2] PNGFA (2009) Parliamentary Brief for Minister for Forests, Nov 2009, Port Moresby

FIGURE 1 – PNG's forest resource base



FAO's *Global Forest Resources Assessment 2010* reports lower forest coverage. Based on their report, in 1990 primary forests covered 31.3 million hectares, declining to 26.2 million hectares in 2010. The annual change of total forest area increased significantly from -180,000 hectares between 1990-2000, to -427,000 hectares between 2005-2010. This translates into an annual deforestation rate of 1.55 percent between 2005-2010.

TABLE 1 – Change in the extent of primary forests in PNG (FAO)

Area of Primary Forests (1,000 ha)				**Annual change of total forest area** (1,000 ha/year)		
1990	**2000**	**2005**	**2010**	**1990-2000**	**2000-2005**	**2005-2010**
31,329	29,534	28,344	26,210	-180	-238	-427

More recent estimates by Shearman et al (2008)[3] and Shearman and Bryan (2010)[4] suggest that intact forests covered 33 million hectares in 1972, or 82 percent of PNG's land area. In 2002, PNG's primary forest area is reported to have decreased to 25.3 million hectares, suggesting that 23 percent of the area in 1972 has been cleared or degraded at a rate of 0.79 percent, or 360,000 ha, per annum. The analysis is based on change detection between a forest map derived from aerial photo of 1972 and a forest map derived from Landsat ETM+ satellite data. The cumulative change (which is in line with the annual rate of deforestation reported by PNG to FAO) has been further

[3] See Shearman P., Ash, J, Mackey B, Bryan J.E, and Lokes B (2008), The State of Forest in Papua New Guinea: Mapping the Extent and Condition of Forest Cover and Measuring the Drivers of Forest Change in the Period 1972-2002, University of Papua New Guinea, Port Moresby.

[4] See Shearman, P and Bryan J (2010) A Bioregional Analysis of the Distribution of Rainforest Cover, Deforestation and Degradation in Papua New Guinea, Austral Ecology, A Journal of Ecology in the Southern Hemisphere

elaborated with a socio-economic model to support the definition of a forest loss trend which report for 2002 a combined annual rate of deforestation and degradation of 1.41 percent.

TABLE 2 – The area of primary rain forest in PNG in 1972 and 2002, and change due to deforestation and degradation over this period[5]

Area of Primary Forests (1,000 ha)		**Change of total forest area 1972-2002** (Percent)		
1972	**2002**	**Deforested area**	**Degraded area**	**Total**
33,228	26,462	15	9	24

Additional conclusions of the report include:

- Of the 1972 commercially accessible forest areas, it is estimated that by 2021, 83 percent will have been cleared or degraded if current trends continue;
- About 4.7 billion tonnes of carbon were stored in PNG's primary forests in 2002. This does not include carbon in forest soils; and
- Between 1972 and 2002 deforestation resulted in the release of a net 926.5 million tonnes of carbon through logging-related forest degradation.

This points to an imminent threat to PNG's forests over the next 2-3 decades. The main drivers of this deforestation and forest degradation are large-scale selective logging and subsistence and commercial agriculture, and to a lesser extent mining activities and forest fires.

Forest resource owners

Over 80 percent of the population is still directly dependent on the local environment for their livelihoods, particularly subsistence agriculture in shifting cultivation. Legitimate landownership and the right to exploit most natural resources are vested with the people and protected by the constitution. Ownership is mainly governed by traditional law – 97 percent of the land is under customary ownership and usually managed among landowners through Incorporated Land Groups (ILGs). About three percent of the land, or about 600,000 hectares, is held privately under a 99-year State Lease or is government land. It has been argued that the land tenure system is an impediment to rural development because land is owned by clans and can neither be alienated nor used as collateral for business loans. The mobilisation of blocks of land for rural development is constrained by the fragmentation of ownership, the difficulties of identifying the "true" owners where there are disputes, and excessive "compensation" demands. However, proposals to "register" the land to facilitate development have faced vehement public opposition. At the village level, the lack of investment opportunities is a more serious constraint. Poor infrastructure, remoteness from markets, the collapse of government extension services, and the high cost or lack of credit, impede the creation of business enterprise.

Logging is carried out in natural forests by a small number of large private logging companies, generally foreign owned. Companies pay royalties to landowners. Landowners are usually represented by a landowner company formed to look after the owners' collective interests, or to an agent. Many problems occur with such representation. In many cases, royalty payments were received by company representatives or agents but never fully paid to the appropriate landowners, or were reduced by illegal deductions made by the companies.

The landowner share of logging proceeds in terms of timber royalties ranges from a flat royalty of PGK10 per m^3 up to PGK35 per m^3, depending on the type of timber. In addition to this royalty, landowners negotiate separate in kind benefits and price premiums as part of the concession

[5] See Shearman et al (2008). Swamp, mangrove, and dry evergreen forest are excluded.

negotiations. These may vary considerably. Royalties and premiums are often not paid in full, are not fairly distributed and contribute little to rural welfare, according to the Independent Forestry Review Team.[6]

Given the land tenure system in PNG, determining the opportunity costs of logging and providing appropriate payments is difficult. Most previous efforts to provide conservation alternatives that meet the logging opportunity costs have failed.[7] Yet at the same time, questions have been raised about the contribution of logging in PNG.[8]

According to PNG's Forest Industries Association, the timber industry provides jobs to some 9,000 people, mostly located in remote areas where few other forms of employment exist. NGOs and the Review Team preparing the 2009 NP submission, however, assert that these are generally lowly paid jobs which demand little training and contribute little to long-term welfare of the local population. Many of the higher-skilled positions are filled by foreign labour.

In addition to providing jobs, logging operators construct infrastructure, as well as health and education facilities, as part of the concession agreements. There is considerable debate about the sustainability and quality of the infrastructure/services provided. The Review Team describes operator performance as under par, while Rimbunan Hijau has commissioned a number of reports to demonstrate the lengths to which it goes to provide infrastructure and services to the landowners and its employees.[9] Under the post-1991 Forest Management Agreements, companies pay for the construction of facilities but are no longer responsible for putting them in place.

The forestry industry

The forestry sector has contributed 3.8 percent to PNG's GDP in 2008, and provided 0.3 percent of employment in the formal sector. In 2009, approximately 2.8 million m^3 of logs were harvested. Of the country's total logs harvested, 80 percent is exported as round logs while 20 percent or less is processed locally. Domestic timber processing is not well developed in PNG although considerable tax incentives and current 'zero' tax on export of processed timber is offered. The major domestic export products are sawn timber, plywood, veneer and Balsa wood products.

Table 3: Declared log harvest and round log exports, 2001-2009

Year	Volume Harvested (m^3)	Volume Exported (m^3) – Round Logs
2009	2,802,277	2,066,854
2008	2,755,554	2,514,915
2007	3,481,617	2,835,402
2006	3,389,891	2,638,296
2005	2,832,162	2,282,414
2004	2,776,900	2,012,136
2003	2,100,284	2,015,208
2002	2,140,953	1,853,549
2001	1,646,047	1,556,220

Source: PNGFA Field Services Division, *PNGFA - SGS monthly reports and database*

[6] Independent Review of Disputed Timber Permits and Permit Extensions (2003) established by the PNG Government in 2003 to review issues surrounding a proposed World Bank loan to improve forest management. The loan was not taken and the review was not completed.

[7] See Race for the Rainforest: Evaluating Lessons from an Integrated Conservation and Development "Experiment" in New Ireland, Papua New Guinea, by Rob McCallum and Nikhil Sekhran, UNDP, 1997.

[8] Drawn from www.odifpep.org.uk/activities/environmental_governance/S0153/png_paperthree_issues.pdf

[9] See www.forestryanddevelopment.com/

Commercial logging operations are permitted under the following categories:

- Timber concessions approved under timber permits;
- Allocation of small timber resource areas under timber authorities;
- Allocation of large scale forest clearance areas for agriculture development and road construction under the National Agriculture Development Program (NADP).

Commercial Timber Operations

Commercial logging operations are permitted in timber concessions approved under Timber Permits governed by Section 73 of the Forestry Act. A Forest Management Area (FMA) is applied to a natural forest area identified for commercial development by PNGFA, where rights have been acquired from customary landowners for a period of 50 years to manage and commercially develop their forests. This is the current forest management regime employed by the PNGFA. Under this arrangement, the concession holder can operate within the timber concession for 40 years.[10]

In total in 2009, there were about 55 approved timber permit operations in the country with a total committed forest area of 9 million hectares of lowland forest.

Allocation of small timber resource areas under timber authorities

A Timber Authority approved under Section 87 of the Forestry Act is granted to enable the supply of timber to sustain small-scale sawmilling, and to clear land for small-scale agriculture development at the village level. A Timber Authority is issued up to an aggregate amount of timber to be harvested annually of 5,000 m^3 or clearance of less than 50 hectares of trees. It is issued by the Chairman of the Provincial Government Committee, responsible for forestry matters. Issuance is based on the advice of the Provincial Forest Management Committee. The National Forest Board gives consent for the endorsement of Timber Authorities. As of December 2009, a total of 62 Timber Authority applications were processed by PNGFA and referred to the respective PFMC to approve and issue to the various forest industry participants throughout the provinces, primarily for domestic processing operations.

While timber authorities are a good opportunity for landowners to participate in and manage small-scale timber operations, and although these timber authorities form an important contributor to enable rural development, it also has to be acknowledged that there are challenges to ensure sustainable harvesting and compliance within these areas. Their lower volume nature and fragmentation removes incentive to demonstrate sustainability or compliance and makes comprehensive capacity building and monitoring costly and difficult to enforce.

Agriculture leases

Agriculture leases aim to convert forest land into agricultural land for cash crops at large scale to foster regional economic development. They are granted to agricultural development companies under a lease-lease back scheme issued by the Department of Lands and Physical Planning (DLPP) as a prerequisite for approval by the Department of Agriculture and Livestock (DAL). Under this scheme, customary land is leased to GoPNG for a period of up to 99 years. In a second step, it is then leased back to registered landowner companies or private companies, and frequently includes primary forest areas that have not yet been logged and will have to be clear-felled before agricultural development can happen.

[10] Residual or undersized trees left behind by the initial logging operation will have grown to an acceptable size of more than 50 cm diameter breast height within 40 years (changed from 35 years as of 1 January 2010), thus the resource can be managed and developed in a sustainable manner till the next cutting cycle.

As of August 2010, applications amounting to a total of 2.7-2.9 million hectares (~9-10 percent) of potential forest area have been submitted under these agricultural leases also known as 'agro-forestry' projects approved by DLPP. Of this area, 0.8 million hectares have received a Forest Clearance Authority (FCA) by PNGFA. This area is therefore approved for clear felling for conversion into agricultural land. While the exact share of forest area of the total FCAs is uncertain, agriculture leases will therefore be significant contributor to deforestation of primary forest over the coming years.

The majority of leases (55 percent) have been granted for oil palm development. Following the oil palm projects, the next most common leases are cocoa, rubber and coffee, and large ruminant livestock. Approx. 15 percent are related to combined reforestation and agriculture projects. There is some concern, however, that some of the approved projects do not currently contribute to agriculture development as expected. GoPNG is therefore reviewing the clearance of primary forest for large-scale agricultural development in order to ensure more sustainable agriculture and economic development in those areas.

Reforestation

Plantation forestry remains small in PNG, but the development of reforestation is important to PNG as it can ease the pressure on logging of native forests and help to maintain a sustainable forest industry as per GoPNG policy.

Figures for 2004 indicate 52,000 ha of reforested area of which around 60 percent was managed by the private sector and the remainder by GoPNG (Bourke and Harwood 2009).[11] In 2004, the volume of plantation timber was 247,214 m^3, valued at 46 million Kina. This seems to have slightly grown to 62,000 ha by 2008 (PNGFA 2010).

The largest plantations are in East New Britain, West New Britain, and Morobe Province, Highlands and in Madang Province. These plantations accounted for 70 percent of total plantations in PNG, while the rest was distributed in 13 locations in 10 provinces (Bourke and Hardwood 2009).

The PNGFA (2010) has stated that the future of forests in PNG lies in plantation development as the forest resources that are accessible and commercially viable are diminishing at a fast rate. The PNGFA has also formulated a policy on reforestation that is supported by a Plantation Development Program which aims to establish 240,000 ha by 2030.

There are significant tenure and socio-economic barriers to more rapid expansion of plantation forestry. Particularly hardwood plantations take a long lead time before harvest and customary landowners are reluctant to wait for long periods to generate incomes. Coupled with limited engagement of the forest industry and limited downstream processing facilities to date, this has prevented a rapid growth of this forestry subsector. The PNGFA also claims that a major constraint to expansion of plantation was a lack of capacity and resources within the authority.

A successful expansion of afforestation and reforestation activities will require a joint approach by GoPNG, the private sector and landowners in order to address barriers to access, increase investor confidence, and provide mechanism to provide land-owners ownership of such projects. One such potential approach could be through a broader promotion of community forestry extension programs.

[11] See Bourke, M and Harwood, T (2009) Ed, Food and Agriculture in Papua New Guinea, ANU, Press, Canberra

Sector regulatory framework

Forestry sector regulations

Over the last 20 years, forest-related laws have evolved toward increasing government control of forest areas. This change has been aimed at enhancing sustainability and overall sector efficiency. However, implementation of the laws and associated codes of conduct often has been difficult because of political ambivalence and governance problems, and an apparent shortage of human and financial resources to effectively ensure enforcement. These challenges have been outlined in a number of reports, including reviews of the administration and practice of the logging industry commissioned by GoPNG between 2000 and 2005, and supported by the World Bank.[12] While the reviews found that all but 5 of 32 proposed new logging projects had so far fulfilled "due legal process", shortcomings were also identified that undermine national efforts to achieve economically and environmentally sustainable forest management. Similarly, an International Tropical Timber Organization (ITTO) "Diagnostic Mission to PNG" in 2007 found that PNG has "many solid acts, laws and legislation in place, but implementation is problematic due primarily to administrative and governance constraints and intervention."[13] Particular constraints that the study identified were that the "human resources of both PNGFA and DEC, especially the field staff, appeared overworked, under resourced and, therefore, not surprisingly, unmotivated" and that "they lack facilities" to implement their mandates.[14] The PNGFA is aware of these challenges has complemented efforts to improve policy to enhance the capacity to monitor and enforce government regulations.

Following the Forestry Commission of Inquiry (or Barnett Commission) a considerable amount of new forest policy and legislation have been introduced.[15] These include:

- ***National Forest Policy***: was issued in September 1991 by the National Executive Council and covers the areas of forest management, forest industry, forest research, forest training and education, and forest organization and administration.
- ***Forestry Act, 1991***: was gazetted in June 1992 as a direct result of the Commission of Inquiry, and provided for the establishment of the new and semi-autonomous Forest Authority to replace the old Department of Forests. The Act provides for much tighter controls in the acquisition and allocation of land for forest development.
- ***Forest Regulation No. 15, 1992***: specified the procedure to enable registration of forest industry participants and consultants under the Act.
- ***Forestry (Amendment) Act, 1993***: was certified in April 1993 and provided for a clear administrative function of the National Forest Board, and of the National Forest Service through the Managing Director and the Provincial Forest Management Committees.
- ***National Forest Development Guidelines, 1993***: were issued by the Minister for Forests and endorsed by the National Executive Council in September 1993. The Guidelines established an implementation guide for aspects covered in the new Forest Act, especially in terms of

[12] Review of Forest Harvesting Projects Being Developed Towards a Timber Permit of Timber Authority (2000-01); Review of the Forest Revenue System (2001-02); Independent Review of Disputed Timber Permits and Permit Extensions (2003); Review of Current Logging Projects (2004-05); and Compliance Audits (2004-05)

[13] ITTO (2007) 'Achieving the ITTO Objective 2000 and Sustainable Forest Management in Papua New Guinea – Report of the Diagnostic Mission', Executive Summary, p. 5

[14] Ibid, p. 3

[15] The text of this section is borrowed from the page "Forest laws of PNG" on the Internet site of the Forest Authority (http://www.forestry.gov.pg), and from the 1997 FAO document Asia-Pacific Forestry Sector Outlook Study: Country Report - Papua New Guinea. (Asia-Pacific Forestry Sector Outlook Study Working Paper No: APFSOS/WP/47).

sustainable production, domestic processing, forest revenue, training and education, review of existing projects, forest resource acquisition and allocation, and sustainable development.

- ***National Forest Plan***: under the Forestry Act of 1991 (as amended), PNGFA has been required to prepare a National Forest Plan to provide a detailed statement of how the national and provincial governments intend to manage and utilize the country's forest resources. The National Forest Development Program (NFDP) under the Plan is now under implementation.
- ***Logging Code of Practice, 1996***: was finalized in February 1996 and tabled in Parliament in July 1996. This PNG code is inconsistent with the Regional Code proposed at the 1995 Suva Heads of Forestry Meeting but is more specific to PNG operating conditions. It has been mandatory as of July, 1997, but will shortly be undergoing review.
- ***The 1996 Forestry Regulations***: cover all facets of the industry procedures and control, and were approved by the National Executive Council in 1996, and finalized soon after with some changes. These Regulations provide the legal status for the implementation of many of the requirements specified under the Forestry Act 1991 (as amended).
- ***Forestry (Amendment no. 2) Act, 1996***: was passed by Parliament and certified on the 11 October 1996. The major amendment relates to the membership to the Board to still have eight members, including the representatives of a National Resource Owners Association and CSOs/NGOs. Further amendments were made in 2000 and 2005.
- ***Environment Act, 2000:*** provides the administrative mechanism for the evaluation of impacts on the environment through an environmental approval and permitting system under the administration of the Department of Environment and Conservation (DEC).
- ***National Forestry Development Guidelines, 2009***: act as an update to previous (1993) guidelines and set out the objectives for the Forestry Sector in PNG. They also recognize climate change initiatives under the United Nations Framework Convention on Climate Change (UNFCCC).
- ***Forestry and Climate Change Framework for Action 2009 – 2015*** *(FCCFA):* and outlines the priorities for the GoPNG regarding sustainable development in the forestry sector.

The regulatory and policy action above outlines some of the initiatives taken by the PNGFA to move the PNG industry to a more sustainable development path to reflect both PNG's international efforts in REDD+ and domestic priorities set by the Government. The Logging Code of Practice has been reviewed in recent years to improve the standard of logging operations in the country. In addition, the PNGFA is developing a plantation recovery strategic plan to revive and bring some of the existing plantations, particularly those managed by GoPNG, back to sustainable and commercial levels.

Recently, PNGFA sought NEC approval for a forest and climate change policy integrating climate change and conservation issues in its forestry operations. Under the Forestry legislation, areas of conservation value could be set aside as 'reserves' within Forest Management Areas earmarked for large scale logging. PNGFA and the OCCD are in the process of jointly identifying and establishing REDD+ pilot projects to test the concepts outlined in the climate change framework.

The PNGFA is also refining it strategies to move the forest industry to a more sustainable level. In September 2009, for example, the Minister for Forests announced that no new FMA timber concessions would be allocated with round log export entitlements.

Internationally, PNG's forestry sector will be increasingly affected by legislation in major markets aimed at increasing the legality of imported wood and wood products. This includes, for example, amendments to the U.S. Lacey Act, EU Timber Regulation and the FLEGT action plan, as well as

forthcoming Australian due diligence legislation. All are likely to have major impact on timber supply markets in general and in timber producing countries like Papua New Guinea in particular.

Service Delivery

In 1995 the '*Organic Law on Provincial and Local Level Governments*' (OLPLLG) was passed by Parliament and was subsequently implemented in 1997. It is essentially an attempt to decentralise government functions and responsibilities by devolving substantial financial management functions and responsibilities such as planning, budget and finance to the sub-national level (Provincial, District and Local Level Administrations and Treasuries), although management of forest resources is still the mandate of the PNGFA. Since the introduction and implementation of the OLPLLG, PNG has gone through an extensive process of national and provincial capacity building in order to apply and comply with the requirements of the law. However, this process is far from completion and continuing problems prevail especially with regard to the management of financial resources at the provincial and lower level. As a result, the delivery of basic services in the provinces is sub-standard even though it varies among different provinces.

Although the New Organic Law established decentralized responsibilities and authority across three levels of government in a more equitable sharing arrangement, it did not adequately address implementation issues. Central, line, provincial and local-level government agencies were left to legislate their respective administrative functions and responsibilities with respect to other government agencies. Inadequate guidance and management of this process has resulted in incomplete and open-ended arrangements, with responsibilities poorly matched to authority. Lines of authority between the three tiers of government are insufficiently developed, and transparent and accountable procedures and systems to enhanced decentralization of service delivery remain a huge challenge. In reality, decentralization may have caused accountability at all levels to decrease.[16]

Such challenges are well associated with PNG's complex geographical and cultural diversity. As captured above, periods of decentralisation have not really improved service delivery at the provincial and district level as intended by the OLPLLG. If it had, this would have been the most effective avenue of fostering greater indigenous participation, as per the aspiration of the national government. However, recent improvements within this system have been initiated between GoPNG and Australia through the Sub-National Strategy (SNS), with the aim of improving service delivery through the strengthening of institutional governance at the provincial and district levels.

Data availability

PNG has a number of national spatial datasets including land-use, physical environment (e.g. soils, landform, climate etc), and forest types which have been developed over a 20-30 year period. A range of agencies develop and maintain their own datasets. While some high quality datasets exist, institutional arrangements are not conducive to collaboratively holding and maintaining datasets. As part of the NP's work to support the establishment of a MRV system for PNG, a comprehensive assessment of available data will be undertaken to refine and complement the overview provided below. Existing data sources include the following:

- PNGFA's data stored in the Forest Authority Database (FAD), which includes concession planning documentation, the Forest Inventory Mapping Systems (FIMS), the Forest Inventory Processing System (FIPS) and Persyst, a PSP database software which is located at the PNG Forest Research Institute in Lae (FRI) and captures the permanent sample plot measurements;

[16] From www.adb.org/Documents/Reports/CGA/CGA-PNG-2006.pdf

- Available satellite optical and radar data;
  - University of Papua New Guinea (UPNG) PNG Remote Sensing Unit;
  - University of Melbourne (also have Joint Research Centre data);
- National Agriculture Development Plan (for future land-use plans).

These datasets have been created using different base maps, are at different scales, were derived from different source data (e.g. aerial photography, Landsat TM etc) and many have complex polygon level attributes. Different base maps have also been used for development of the land-use versus the forestry datasets which complicates the combination of data from different sources.

Forest research plots

The Forest Research Institute maintains a set of permanent 1 hectare plots which were established under a research project titled "Intensification of Growth and Yield Studies of previously Logged-over Forests in Papua New Guinea", 1992-1999, funded by the International Tropical Timber Organization (ITTO). The project resulted in the establishment and measurement of 72 Permanent Sample Plots (PSPs) in cutover natural forests throughout PNG. Since 1995, FRI has also expanded the PSP network by establishing and measuring more than 55 additional plots of which 9 are on un-cut natural forests.

From 2001 to 2005, ACIAR project FST/1998/118 (Planning methods for sustainable management of timber stocks in Papua New Guinea) provided funds to support the re-measurement of these plots. During this time 32 PSPs were re-measured. The current ACIAR project FST/2004/061 is providing funding for ongoing maintenance and re-measurement of these plots as well as the management of the PSP database. As at July 2008, ACIAR project FST/2004/061 had funded the re-measurement of 30 PSP plots.

ITTO Project consultants developed a PSP database computer program (Persyst) in the late 1990s, a long with a forest growth model called PINFORM for lowland tropical forests of PNG using data from these PSPs. FRI national staff have managed PSP re-measurements over the last 15 years.

In 2006-7 the European Commission's Joint Research Centre and the Max-Planck Institute for Biogeochemistry undertook a feasibility study on forest area change and carbon stock change assessment with the PNG's Forest Research Institute (FRI). The reports were made to SBSTA26 and COP-13.

It has to be pointed out that data on biomass and carbon stocks are still limited in PNG. Furthermore, in most cases research plots have been set up for a purpose different from setting up a multipurpose forest inventory. Hence, more work has to be conducted in this area.

Available satellite data

Australia is sourcing access to available optical and radar data primarily from SPOT, Landsat, JERS-1 and ALOS PALSAR. Australia hopes to obtain cloud free optical imagery prior to 1990 with 1st coverage of cloud free radar data from 1992. Australia is working with a range of national and international organizations to obtain this data and refine methods for integration of these various data sources into continuous spatial coverage and continuous time series. The intent is to make this historic and ongoing data streams available to PNG and other countries in the region.

The Joint Research Centre team also considered the feasibility of determining deforestation and degradation rates from available satellite data – such as the Maryland University Global Land Cover Facility archive. Reports were made to COP-12 and GOFC-GOLD meetings.

2.3. The importance of climate-compatible development to Papua New Guinea

Climate change is both a threat and an opportunity for PNG. Greenhouse gas emissions are high relative to the level of development, especially due to emissions from land use, land-use change and forestry. Rising sea levels, floods, landslides and malaria pose an increasing threat to PNG's population. On the other hand, climate-compatible development offers an opportunity to move to a broader-based, low-carbon growth path.

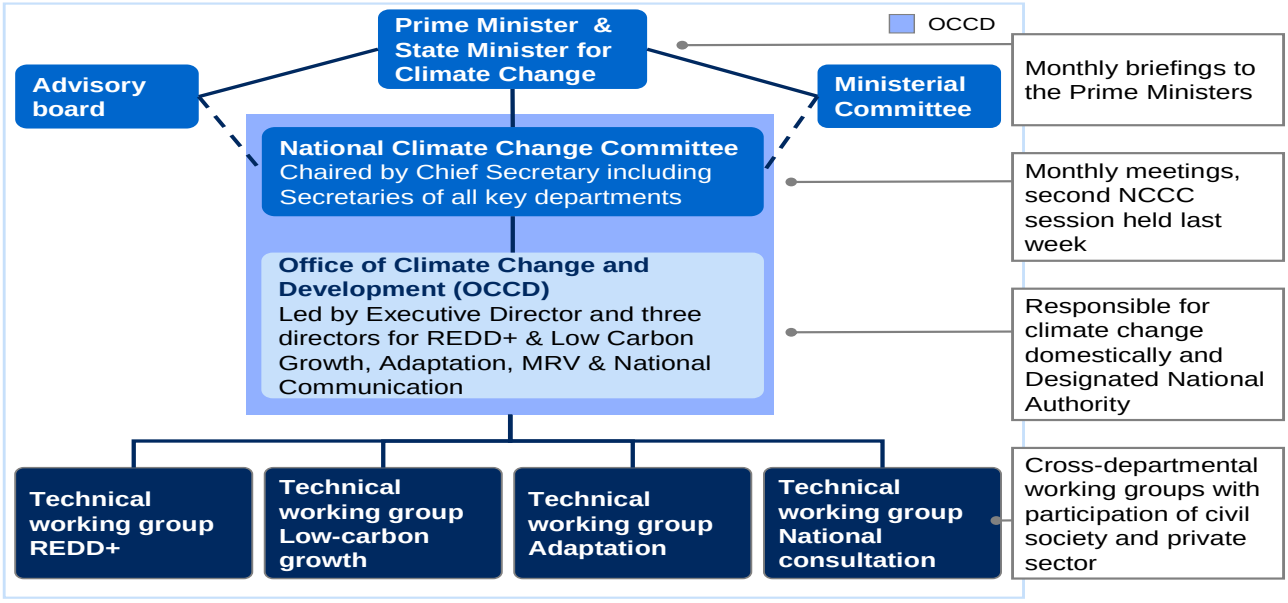
PNG contribution to the international debate on climate change

PNG has played a leading role in advancing the agenda on Reducing Emissions from Deforestation and Forest Degradation plus Conservation, Sustainable Forest Management and Carbon Stocks Enhancement (REDD+) in the UNFCCC. REDD+ was first introduced into the COP by PNG and Costa Rica at COP-11 in 2005, leading to COP-13 decision 2/CP.13 in Bali in December 2007. PNG has since contributed various ideas for stimulating action in submissions to the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA). In addition, PNG plays a leadership role in the Coalition for Rainforest Nations and has worked through the Paris-Oslo process to promote an interim REDD+ agreement as a prelude to a globally applicable, legally binding climate change treaty. PNG has been the co-chair position of the Interim REDD+ Partnership Secretariat until January 2011.

Progress on the domestic stage

In March 2010, the National Executive Council (NEC) approved the creation of a governance structure to coordinate actions against climate change in PNG (Figure 2).

FIGURE 2 – PNG's governance structure for climate change



Climate change is coordinated in a whole-of-government approach by the National Climate Change Committee (NCCC) (Figure 3). It is to be complemented by a ministerial committee and advisory board with membership drawn from international and national experts to provide independent advice. Both are envisaged to be set up in 2011.

The NCCC's objective is to coordinate and decide on climate change action and policy in PNG. It brings together the sector heads of all GoPNG departments and agencies that are affected by climate change and it is chaired by the Chief Secretary, PNG's highest ranking bureaucrat. The NCCC comprises:

- Department of Agriculture and Livestock
- Department of Environment and Conservation
- Department of Foreign Affairs
- Department of Justice
- Department of Lands & Physical Planning
- Department of National Planning and Monitoring
- Department of Personnel Management
- Department of Petroleum and Energy
- Department of the Prime Minister and National Executive Council
- Department of Treasury
- National Fisheries Authority
- Office of Climate Change and Development
- PNG Forest Authority

The Office of Climate Change and Development, known as OCCD, acts as the Secretariat to the NCCC and is the coordinating entity for all climate change policy in PNG and the Designated National Authority under the UNFCCC, in which it replaces the Office of Climate Change and Environmental Sustainability. It was also established under NEC Decision 54/2010.

The OCCD's mandate is founded upon the principles of the Fourth Goal of PNG's National Constitution which stipulates that:

"Papua New Guinea's natural resources and environment are to be conserved and used for the collective benefit of all and are replenished for the benefit of future generations."

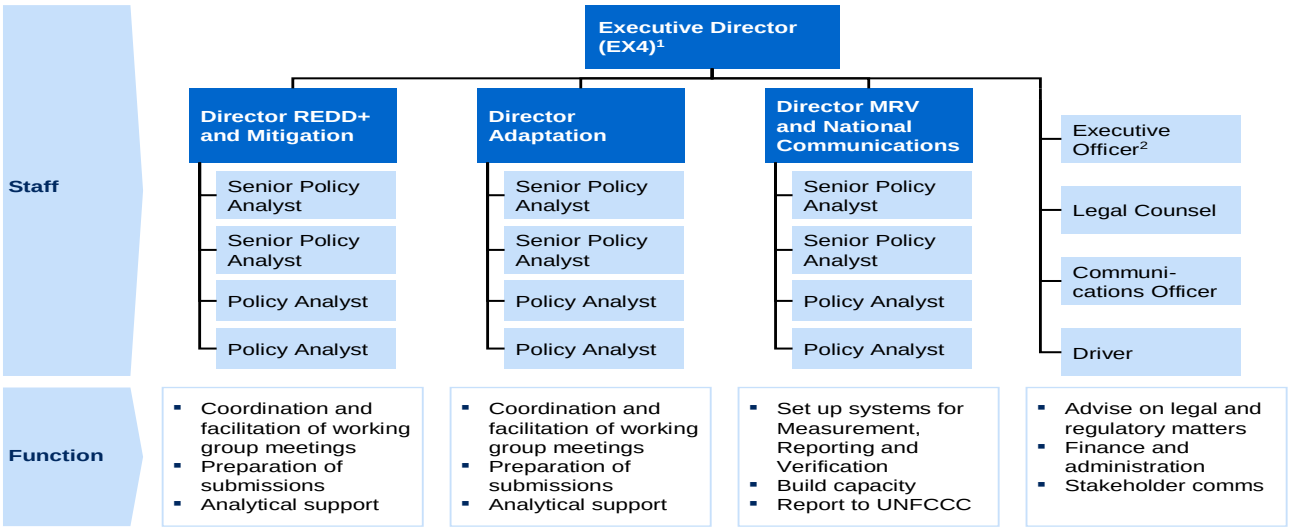
The mandate is derived from NEC decision 54/2010, which specifies:

- That the National Climate Change Committee (NCCC) and the Office of Climate Change and Development as its secretariat take full and exclusive responsibility for all policies and actions under Pillar Five of the Vision 2050, concerning Climate Change and Environmental Sustainability;
- That the OCCD engages and involves all stakeholders to build a common vision and pathway on action to tackle climate change;
- That the OCCD works in close collaboration with, and in support of other departments and agencies to achieve these goals.

The OCCD is designed as a lean, efficient organization that coordinates the climate-change efforts of the GoPNG (see Figure 2). After a 6-month period of institutional set up and recruitment, the OCCD has initiated work with a staff of 3 directors and 12 analysts in late August 2010, and has by now become fully operational with a total staff of 20. The office has already conducted a first comprehensive training programme for its staff in September 2010. A second 1-week workshop for

all staff is foreseen for February 2011. Capacity development for the OCCD's staff to enable the OCCD carry out its tasks effectively will remain a key priority over the coming months and years, for which the NP will play an important role.

FIGURE 3 – The OCCD's organizational structure



1 Will assume the position of the Designated National Authority handling climate change under the Kyoto Protocol
2 Most financial and administrative functions will be handled by the Prime Minister's Department, in conjunction with the Executive Officer

The OCCD has four immediate tasks:

- Conduct a national and provincial consultation on climate-compatible development and REDD+. The consultation will engage a broad range of stakeholders including government, civil society, private sector and local communities. At the local level, the consultation is designed to yield a better understanding the climate-change issues facing communities, obtain feedback on what it would take communities to participate in a national REDD+ program and prioritize adaptation measures most appropriate for communities.
- Launch immediate Fast Start Actions including 'readiness activities' for REDD+ and pilot projects for different approaches to mitigation, adaptation and low carbon growth.
- Prepare the final version of PNG's National Climate-Compatible Development Strategy (CCDS), outlined in section 3 of this document, which includes REDD+.
- Determine financing requirements of Fast Start Actions and scale up and establish an overall investment plan, which can form the basis for international negotiations of REDD+ support.

In addition, GoPNG is ensuring multi-stakeholder participation and input through a number of Technical Working Groups. They comprise GoPNG departments, the private sector, civil society and development partners to ensure that a broad range of perspectives are considered in the OCCD's work. 3 technical working groups on REDD+, Low-Carbon Growth, and Adaptation have been meeting regularly since Q1/2010 to guide GoPNG's work on climate change, including the preparation of the CCDS. A 4th technical working group on consultation was approved by the NCCC in September 2010 to guide the OCCD's national and provincial consultation process. The REDD+ Technical Working Group is further supported by three sub-working groups on Agriculture, Forestry and MRV which will play a key role in contributing to the implementation of the NP. The overall governance structure ensures that existing capabilities in PNG are utilized effectively and that additional capacity can be built up in a targeted and lasting manner.

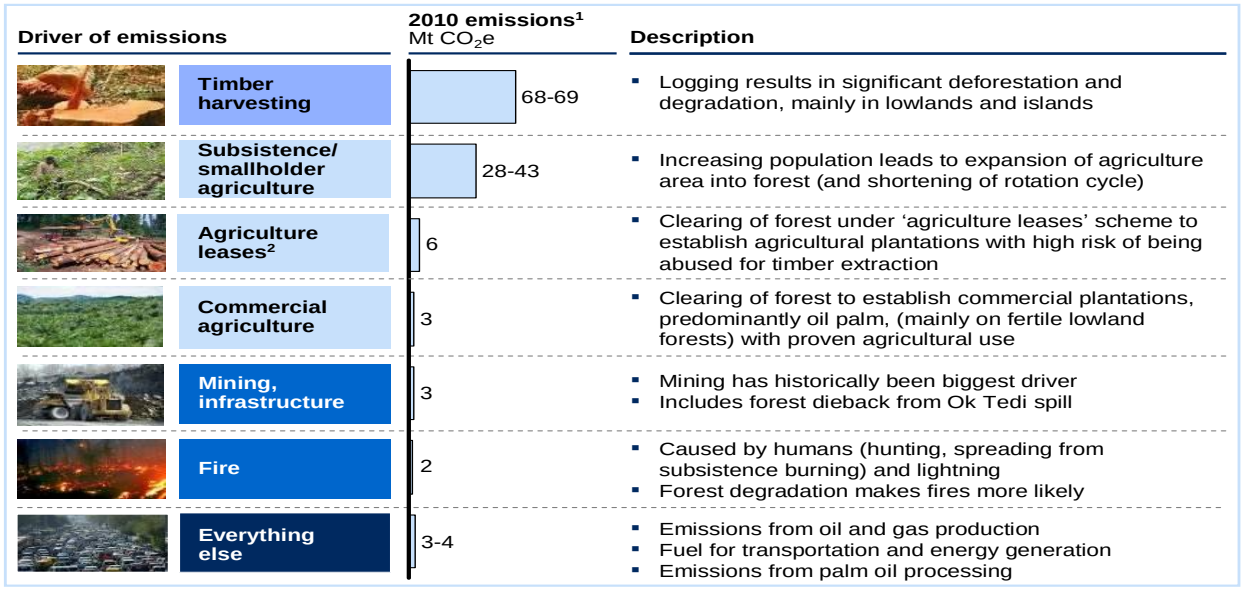
2.4. Net Greenhouse gas emissions

The baseline level of greenhouse gas emissions

Over 95 percent of Papua New Guinea's current emissions derive from land use, land-use change and forestry (LULUCF), including the effects of forest fires, based on PNG's Interim Action Plan.[17] The remainder come from mining, transport, the production of energy and oil and gas. Emissions from shipping, aviation and fossil fuels that are exported (such as LNG) are not included, in line with IPCC (Intergovernmental Panel on Climate Change) guidelines. The level of gross emissions is estimated at 113-130 Mt CO_2e (million tons of carbon dioxide equivalent) for 2010 (Figure 4).[18] Of the total, 110-126 Mt CO_2e are related to land use, land-use change and forestry (LULUCF). Emissions from non-LULUCF sectors are estimated to amount to 3-4 Mt CO_2e. In per capita terms, this translates into total gross emissions of 17.2-19.8 t CO_2e per capita in 2010, if LULUCF is included. For non-LULUCF sectors only, GHG emissions amount to 0.5-0.6 t CO_2e per capita.

To estimate gross GHG emissions, data specific to Papua New Guinea has been used wherever available. In the absence of such data, international benchmarks and data from comparable tropical forest countries have been used as an approximation. Further research is required to verify the emissions in specific sectors and develop a detailed greenhouse gas inventory. Part of such refinement will be carried out as part of the consultation process for the CCDS, which the emissions data in this document is based on. Additional work to update emissions data and the National GHG Inventory is currently being carried out in the development of the Second National Communication to the UNFCCC.

FIGURE 4 – Sources of PNG's historical GHG emissions



1 Estimate of 2010 extrapolated from 2008/09 data
2 Exact emission for 2010 still to be verified

SOURCE: Shearman et al (2008, 2009, 2010); Fox et al (2010); Hunt (2010); REDD+ technical working group

[17] PNG's Interim Action Plan for Climate-Compatible Development contains some updates to GHG emissions under BAU and abatement potential compared to PNG's Draft Climate-Compatible Development Strategy.

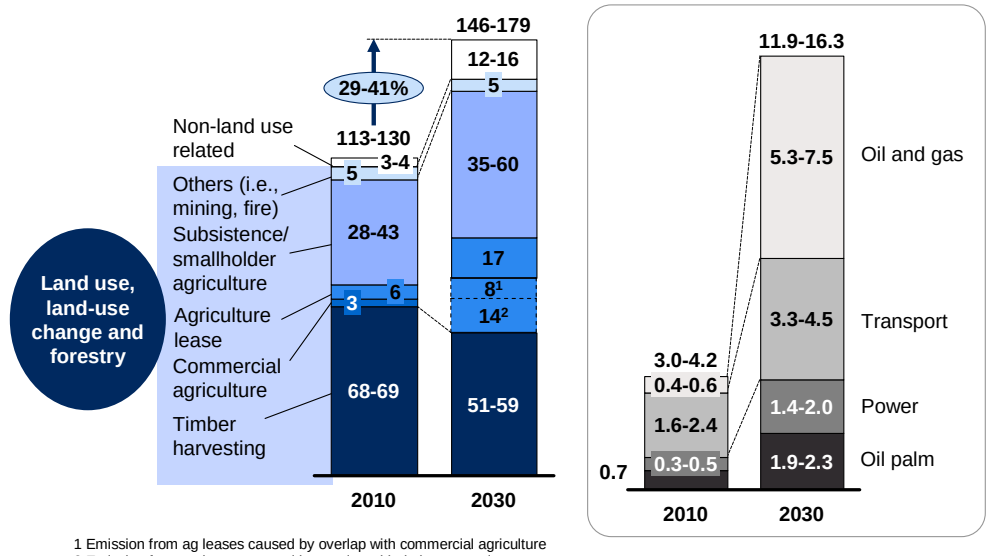
[18] Not including removals from carbon sinks.

REDD+ development and emissions under business as usual

A business as usual (BAU) scenario describes a growth path before any mitigating action is taken on climate change. Figure 5 shows a scenario that is a mid-point between the growth aspirations set out in PNG's Vision 2050 and Development Strategic Plan and a more cautious path in which both LNG projects are completed, but the economy is slow to diversify into non-resource sectors.

The Business as Usual growth path is carbon-intensive. GHG emissions continue to increase, by up to 40 percent by 2030 under the BAU scenario. The majority of this increase would come from increased deforestation from large-scale agriculture leases, subsistence and smallholder agriculture (mostly as a result of population growth). Absolute emissions from non-land use sectors are still low. However, emissions from the energy, transport and oil and gas sectors will have the highest rates of increase over the next 20 years. Oil and gas emissions would rise further if any of the natural gas produced by either LNG project was retained for domestic consumption, but could be reduced if the liquefaction plant were powered by renewable energy sources.

FIGURE 5 – PNG's projected gross GHG emissions



1 Emission from ag leases caused by overlap with commercial agriculture
2 Emission from ag leases caused by overlap with timber extraction
SOURCE: REDD+ technical working group

2.5. Opportunities for greenhouse gas abatement

In February 2010, the Government of Papua New Guinea made a conditional commitment, submitted to the UNFCCC under the Copenhagen Accord, that greenhouse gas emissions would be reduced by ~30 percent from current levels, or ~50 percent from the BAU forecast, by 2030.[19] The bulk of this abatement comes from reducing emissions caused by land use, land-use change and forestry, which currently account for over 95 percent of emissions, but generates less than 20 percent of GDP.

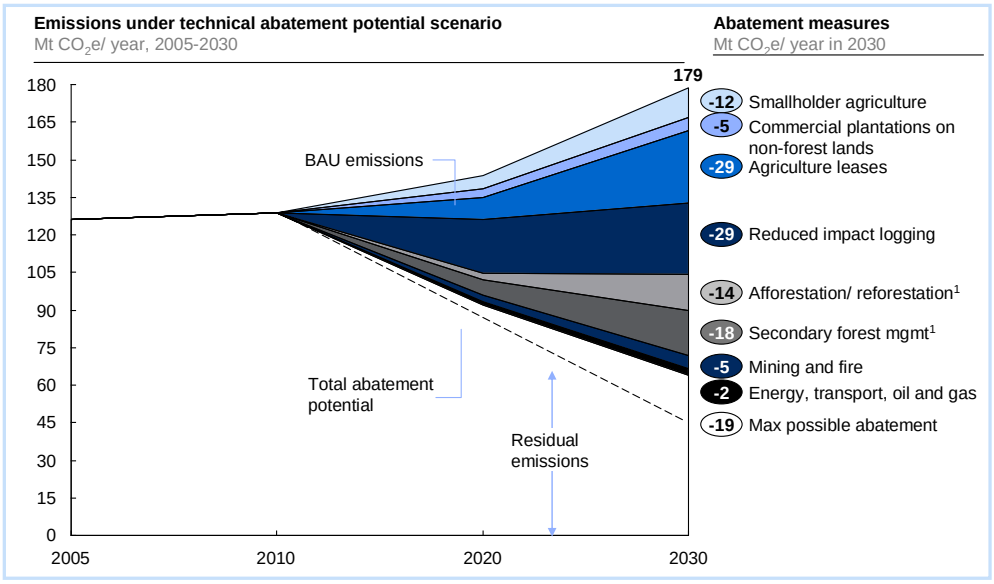
There are numerous technically feasible, cost-effective options to abate and sequester LULUCF emissions in Papua New Guinea. For every driver of deforestation and degradation there are multiple abatement options, ranging from full abatement resulting from ceasing an activity, to partial abatement from reducing an activity's carbon intensity. Full abatement of emissions from

[19] http://unfccc.int/files/meetings/application/pdf/pngcphaccord_app2.pdf

subsistence agriculture, for example, would require stopping subsistence agriculture altogether, which is clearly not a feasible option. Agricultural extension programs, however provide an alternative means reducing emissions related by helping communities to use their agricultural land more effectively, thereby reducing the pressure on forests. Similarly, maximum abatement in the forest sector would be achieved by stopping logging altogether. Such an approach may have conservation merits, but is not strictly required for REDD+. Reduced impact logging could be one alternative option to reduce emissions, particularly for existing concessions. REDD+ opportunities need to be carefully balanced with other important considerations such as economic development.

Figure 5 sets out the growth in emissions forecast under BAU and potential emissions reductions from the most important abatement levers under a strategy which encompasses abatement measures that are broadly compatible with the continued development of the forestry and agriculture sectors. Such measures do not generate the maximum potential abatement, but they do achieve considerable reductions while preserving economic growth. While Figure 6 presents the overall abatement potential for this strategy, it is important to note that the realized abatement volume will depend on the extent of the implementation of the individual abatement levers.

FIGURE 6 – Projected 2030 emissions reduction potential



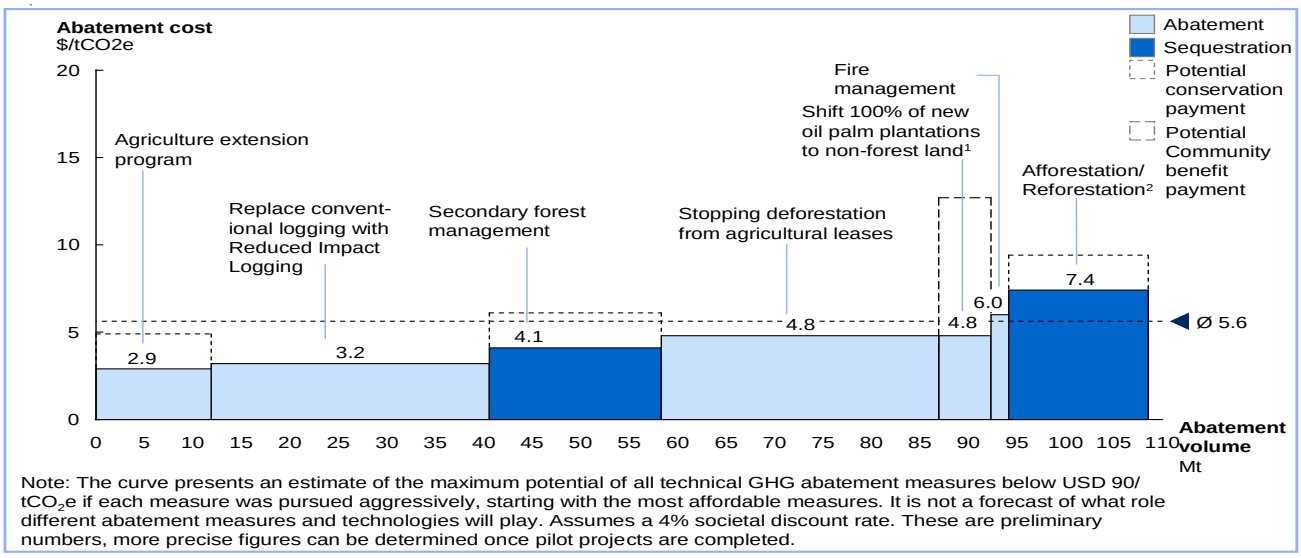
1 A/R and secondary forest management are not emission reduction initiative, but carbon stock enhancement initiatives
2 Assuming A/R abatement potential comes from its usage as conservation areas. If the areas will be used for plantation forestry, further research/analysis is need to calculate the abatement potential

SOURCE: REDD+ technical working group

The theoretical cost of abatement measures such as these is estimated at approximately USD 5.6 per t CO_2e, amounting to ~USD 5.9 billions over the next 20 years (2011-2030). Naturally, these reductions are conditional on an international agreement that will fund REDD+ so that Papua New Guineans are compensated for the ecosystem services and mitigation benefits they contribute to the world, and for the resulting changes to their incomes and livelihoods. Figure 7 below shows the cost curve for the abatement measures related to LULUCF, with the lowest cost measures on the left side near the axis and the most expensive on the right side.[20] Overall, these measures would reduce emissions by approximately 60-80 percent compared with the BAU scenario.

[20] Unit costs per tonne of CO_2e abated are calculated based on cost of programmes, with the exception of agricultural leases and shifting oil palm plantations which also include opportunity cost in the form of compensations for stakeholders that would lose revenue or income from a change in activities.

FIGURE 7 – Abatement potential related to LULUCF by 2030



1 Abatement cost is calculated based on foregone profit from timber produced by clearing forest, assuming zero additional cost of establishing oil palm plantation on non-forest land. Further discussion is needed to determine oil palm community benefit payment
2 Assuming A/R abatement potential comes from its usage as conservation areas. If the areas will be used for plantation forestry, further research/analysis is needed to calculate the abatement potential

SOURCE: REDD+ technical working group

The abatement measures are all subject to the national consultation process and have not been turned into domestic policy yet. Their translation into policy is contingent upon a piloting and demonstration phase and in some cases to international support. Each measure is described below:

- Increasing yields in subsistence and smallholder agriculture by investing in agricultural extension programs and market access could save 9-15 Mt CO_2e by 2030 on the premise that 25 percent of farming communities improve their methods and preserve current forest coverage. The abatement effect of these measures is unproven, but they are likely to increase rural incomes and food security, so have value going beyond climate change mitigation.[21]

- Stopping deforestation from agriculture leases could save ~27-30 Mt CO_2e per year by 2030 if ~60-80 percent of the ~670,000 ha of approved agriculture leases (as of May 2010) could be withdrawn (roughly 40,000 ha are estimated to have already been logged). These ~670,000 ha only include projects with full approval from PNGFA and DEC. It is assumed that starting 2015, some of the land deforested for agriculture leases areas will be used for commercial agriculture plantations particularly oil palm, which is considered a separate driver of deforestation in the period from 2010 to 2015. Moreover, agriculture leases may be perceived as an alternative source of timber production with more limited regulation that might replace some of the production from existing and new FMA (Forest Management Agreement) areas. Additional agriculture leases that have not yet obtained final approval have not been included in these calculations. As agriculture leases are one of the main drivers of the projected increase in GHG emissions between 2010 – 2030 in their current form and because they can be an important contributor to economic development if implemented sustainably, GoPNG is currently preparing a review of agriculture leases in order to minimise the clearance of primary forest for

[21] Improved agricultural practices need to be carefully implemented so that communities receiving agricultural extension services as part of a program which protects the existing forests instead of additional clear cutting to increase the amount of land used for agricultural purposes.

large-scale agricultural development while ensuring that sustainable economic development is enabled.

- Reducing deforestation in commercial agriculture could save ~2-9 Mt CO_2e per year by 2030. The primary means of achieving this would be by shifting 100 percent of new oil palm plantations from forested to degraded land. We assume that starting in 2015, 40-50 percent of new oil palm plantations will be established on former agricultural lease areas, while the rest will be planted on degraded lands (e.g., pasture land, grassland). Alternative land uses and economic development opportunities for landowners will need to be developed for areas where BAU clear felling is displaced. One example of such alternative economic development opportunities is forest conservation measures, which are an important option for these forest areas that could complement agricultural development on degraded and grass land.
- Implementing Reduced Impact Logging (RIL) practices[22] in all logging concession areas could save 21-36 Mt CO_2e per year by 2030. This includes the potential to reduce emission from forest degradation by ~33-55 percent in carbon stock loss and to reduce the deforested area by ~33 percent within forest concessions. As an alternative to RIL, restricting logging to plantation forests through a moratorium on new forestry concessions would reduce more than double the emissions (~66 Mt CO_2e per annum by 2030), though at a higher opportunity cost. If applied at scale, this option could negatively impact on plans for downstream value adding activities and employment in the sector, although new employment opportunities for local communities created in forest conservation could offset some job losses.
- Promoting afforestation/reforestation on marginal lands, with a view to protecting watersheds and in some cases developing forest plantations could sequester ~14 Mt CO_2e per year by 2030.
- Managing secondary forests, promoting re-growth through selected replanting and silvicultural practices in logged-over forests could save 14–21 Mt CO_2e per year by 2030.
- Forest conservation provides critical opportunities to protect carbon stocks and most importantly biodiversity from deforestation and forest degradation. Furthermore, implementing forest conservation measures will create new employment opportunities for local communities. The abatement potential of this initiative has not been calculated, since it heavily depends on the prior land allocation. For example, the abatement potential will be different between conservation areas that were formerly assigned for agricultural leases or wildlife management areas. In this context, it has to be pointed out that the eligibility of REDD+ funding for the latter case remains somewhat unclear. If there is no threat to an area, because it is too steep for logging, uninhabited or already designated as protected area, it may be difficult to include it in REDD+ as it does not lead to direct, measurable abatement. This does not lessen the value for the country that conservation measures would have in such areas, and other sources of funding may be available.
- A national fire management program and continued efforts to reduce the environmental impact of large-scale mining could save ~5.4 Mt CO_2e per year.

[22] Reduced impact logging (RIL) differs from conventional logging inasmuch as it extracts commercially viable timber at sustainable volumes while minimizing collateral damages. RIL reduces degradation by minimizing logging roads, managing directional timber falling and optimizing cutting methods. RIL can reduce biomass loss to 20-30 percent from ~40-50 percent through conventional logging practices and reduce the eventual area deforested by 33 percent.

Reducing emissions in other sectors could save ~2.1 Mt CO_2e per year by 2030, including:

- ~1.1 Mt CO_2e per year in the power sector, coming from a combination of constructing and/ or rehabilitating grid-connected hydro and geothermal power stations and rural electrification using micro-hydro and solar technology;
- ~0.5 Mt CO_2e per year in the oil and gas sector, with additional potential if LNG plants can be powered by renewable energy sources;
- ~0.5 Mt CO_2e per year in the transport sector, mostly from energy efficiency measures.

The abatement measures set out above have the potential to put Papua New Guinea onto a low-carbon growth pathway that will have benefits beyond reducing emissions. The number of jobs created in new sectors, such as tourism and forest management, should more than outweigh those lost in the traditional logging sector. Overall, with the right additional inputs, the economy can therefore achieve the same 6-7 percent annual growth rate under a low-carbon growth path as under the BAU scenario, with over 20,000 additional jobs created and a more equitable income distribution. In order to translate the identified initiatives into real action, pilot projects and programs need to be rolled out over the next three years.

3. Strategies including lessons learned and the proposed National Programme

3.1. The CCDS and Interim Action Plan

PNG has developed a draft Climate-Compatible Development Strategy (CCDS) which is currently undergoing a consultation process with stakeholders in the country. To bridge the period until the final CCDS is in place, PNG has also developed an Interim Action Plan as a practical step toward realizing a 50 percent decrease in PNG's emissions by 2030 as set out in Vision 2050. It also reflects the integration of PNG's climate-change objectives into its Medium-term Development Plan (MTDP).

The NEC has endorsed the main elements of the national CCDS (NEC Decision 55/2010, see box 1).

Box 1: Main principles, themes and intended actions contained in the Executive Summary of the Report on Climate-Compatible Development

On 22nd March 2010, Council . . . endorsed and supported **as a matter of National priority**, the main principles, themes and intended actions contained in the **Executive Summary of the Report on Climate-Compatible Development** as follows:

(i) That mitigation of and adaptation to climate change are inseparable from economic development and future prosperity of the people;

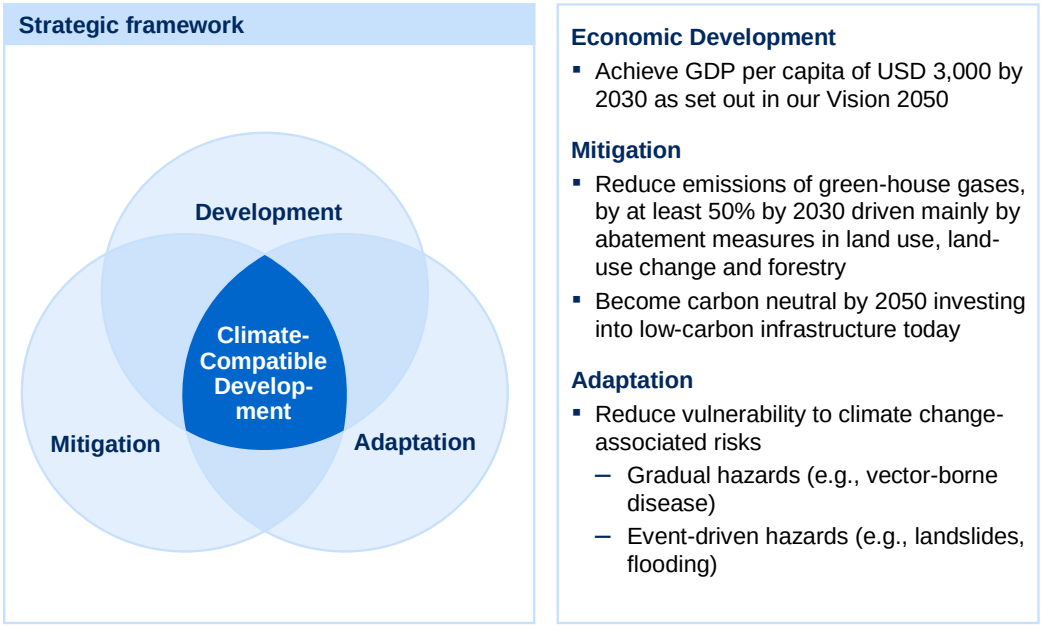
The CCDS outlines the overall strategic direction for the country to achieve the Vision 2050 goals of 50 percent net GHG emission reductions by 2030 and carbon neutrality by 2050, based on PNG's net GHG emissions profile and the corresponding abatement opportunities. The Interim Action Plan outlines immediate priorities and actions for the next 6-12 months to set PNG on this path, including stakeholder awareness building and capacity development for the OCCD.

By adopting the core elements of the CCDS and the Interim Action Plan, the NEC recognized that economic development must be combined with climate change mitigation and adaptation measures as the core climate-related challenges that PNG faces:

- Promotion of economic development through low-carbon growth;
- Mitigation of net GHG emissions through participation in a global REDD+ scheme;
- Adaptation to climate-related hazards.

The confluence of these three objectives forms the heart of PNG's climate-compatible development strategy, which will foster environmentally sustainable economic growth while capturing the opportunities of carbon mitigation and protecting against the perils of climate-driven hazards.

FIGURE 8 - PNG's Climate-Compatible Development Strategy



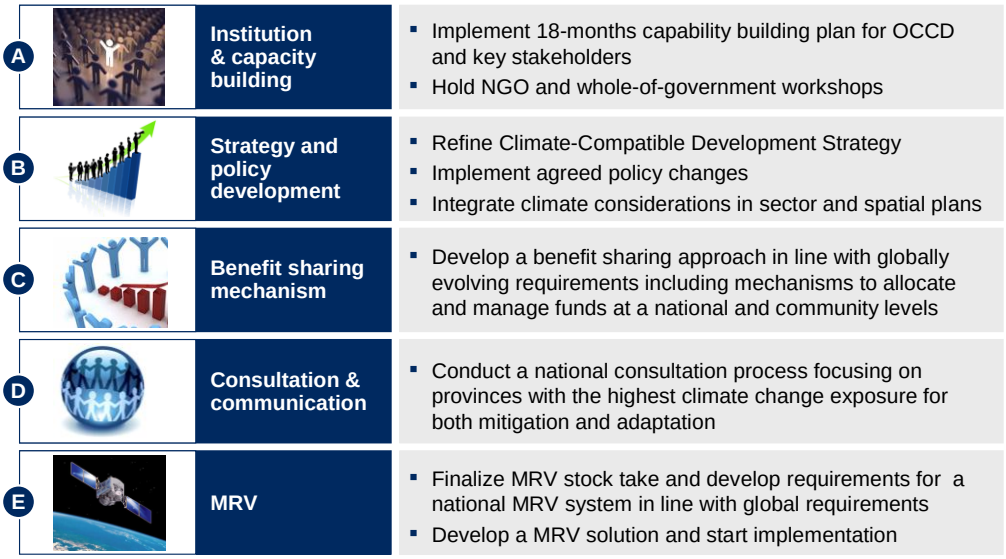
3.2. Priority actions

The Interim Action Plan spells out 5 priority actions for GoPNG that are to be initiated in 2010 (Figure 9). This plan is subject to continued updating and refinement.

All priority actions are significant contributions towards REDD+ readiness. Each initiative will follow a whole-of-government approach and will require close cooperation with landowners, civil society organizations, the private sector and development partners. GoPNG has made important first steps to incorporate climate-compatible development, including REDD+, into its overall development planes, e.g., through the MTDP. Yet, more work needs to be done in the future. One critical example is the development and enhancement of spatial planning at both the national and provincial level to ensure that land use is able to contribute to a mix of different development objectives.

The actions below will help to contribute to PNG's REDD+ Readiness and ensure that climate-compatibility is deeply anchored into PNG's socio-economic development, but also that benefits beyond GHG abatement will be embedded into a REDD+ readiness framework. The implementation of these priority actions will be carried out by different stakeholders both within and outside GoPNG in a coordinated fashion. Development partner support, such as this NP, will contribute to individual actions within the broader REDD+ readiness framework. This NP should thus be seen as one important contributor to a broader, integrated approach to REDD+ readiness. Accordingly, not all priority actions listed below will be addressed by the NP.

FIGURE 9 – Priority Actions



A) Capacity building

In 2010, PNG has laid the ground to create the institutional and governance structure to effectively deal with climate change and REDD+, as described in section 2.3 of this document. The next 18 months will see a strong emphasis on strengthening this institutional structure and enhancing the capacity among key institutions and stakeholders to efficiently and effectively fulfil their roles. To ensure that capacity building will be carried out in a targeted and focused manner, it will be important to clearly identify the needs of each stakeholder group in the capacity building efforts for REDD+ readiness. A capacity gap assessment for REDD+ readiness will be carried out to clearly identify what capacity development is needed for the different aspects of readiness, and where. This capacity gap assessment will inform the capacity building and training programs to address the needs of GoPNG, non-government institutions, and local communities. Full engagement of all involved GoPNG agencies, civil society organizations, provincial authorities, and – at the appropriate times – local communities will be critical to developing a robust and inclusive capacity building strategy. Accordingly, capacity building will cover a broad range of topics with a different focus for different stakeholders depending on their specific role in REDD+ readiness efforts and the envisaged REDD+ mechanism.

- In the readiness phase, implementing institutions such as PNGFA, FRI, UPNG, DAL, DLPP and DEC, will be required to coordinate, and identify how best to build their institutional and individual capacity, through this program support. Capacity building will come through the process of learning by doing on pilot and demonstration projects. In some case, training of trainers will be required to improve the existing capacity e.g., of provincial staff engaged in local communities for some of the current sustainable forestry activities.

- Growth of local capabilities will come primarily from experience on the job, e.g., project design and implementation, both with the support and guidance from advisors and experts as needed. Where necessary this will be complemented by formal skills training. Capacity building will be through targeted training sessions aimed at supporting the scale-up of pilot projects. After pilot programs have demonstrated impact, the challenges and capability gaps for future implementation will be codified and built into a training curriculum. GoPNG has contracted the services of an international consulting firm, to support this process. In addition, the OCCD is identifying PNG nationals as well as overseas experts who can be seconded to the OCCD for an initial 12-month period. All secondment positions will be fully embedded into the organizational structure of the OCCD and focus on helping to build capacity and capabilities of the permanent staff, in addition to directly pushing forward the OCCD's work. The proposed NP is envisaged to partly facilitate this process through the position of 'technical assistant' for the OCCD Director 'MRV & National Communication' as well as a Programme Manager for the overall management of the NP implementation.
- To ensure that capacity development efforts targeting OCCD benefit PNG stakeholders beyond the OCCD, including both GoPNG and non-governmental actors, additional participants will regularly be invited to join the OCCD's training sessions. In addition, workshops that bring together civil society representatives, and whole-of-government workshops similar to those conducted in 2010 will be held at least once per year to focus both on content and capacity building.
- A REDD+ study tour to Indonesia, envisaged for early 2011, will facilitate the exchange between PNG and Indonesia and allow 6-8 members of the REDD+ Technical Working Group to learn from Indonesia's experience with REDD+ to date. The study is supported by AusAID.
- Where technical advisory services are sought, e.g., for the development of an MRV system as proposed under this NP, strong emphasis will be placed on the inclusion of sufficient training to ensure that relevant implementing partners and stakeholders will be fully capable of independently carrying out their tasks – such as for example operating a new MRV system – beyond the duration of the technical advisory support.
- In addition, specific capacity building and training programmes, including the training of trainers, will be needed to enable stakeholders to effectively implement and monitor abatement actions. This includes, for example, training programmes for reduced impact logging – both for logging operators and PNGFA field officers – such as proposed under a project proposal submitted to ITTO.
- The envisaged pilot and demonstration activities complementing REDD+ readiness activities will be carried out with the full and effective participation of landowners and local level government. This means not only comprehensive awareness building and consultation at the local level, but also a commitment to local training and capacity development. For instance, local involvement – and hence capability building – will be critical to the successful implementation of sustainable forestry pilots, agricultural extension programs, or demonstration of reduced impact logging, but also to readiness activities such as ground truthing for PNG's MRV system. The OCCD and GoPNG recognize that a wide range of groups and institutions will need to contribute to developing this capacity. Community-based organisations, NGOs and local churches will for example play a major role in building awareness, consulting, and providing training to local communities. Indeed, many of these activities are already on-going, emphasizing the role of the OCCD as a coordinating and supporting body for local capacity building.

- Each of these activities will include components of training and capacity building that enable landowners, operators and GoPNG staff at the national, provincial and local level to support and sustain demonstration activities, and eventually a REDD+ mechanism, in the long term. Training and capacity building will need to address capability gaps at all points in the pilot planning, roll-out and ongoing operation. For instance, at the planning stage, capacity building will address such issues as land-use planning at the ward, district and provincial level. At the same time, OCCD will play a facilitating role in ensuring that the learnings from those activities are available to other projects and can be replicated in other areas of PNG. Similarly, the provincial consultation process outlined below aims at equipping landowners with the skills and understanding to effectively act at the local level.
- Capacity building will also cover institutional and governance structure to address climate change in PNG. This will for example include the longer-term plan for how the institutional role and structure of the OCCD evolves (e.g., into an agency or ministry) and how an MRV system will be governed and organised within GoPNG.

B) Strategy and policy development

An updated version of the National Strategy for Climate-Compatible Development will be completed with the insights from a provincial consultation process and the ongoing international REDD+ negotiations. NEC Decision 55/2010, accepting the principles of climate-compatible development, mandates that, "A review is necessary of all national development policies and plans which impinge upon and are affected by climate change mitigation, adaptation, and low carbon growth, to ensure climate compatibility." In light of this direction, the Government is taking steps to ensure that:

- The Medium Term Development Plan for 2011-15, currently under development by the Department of National Planning, will be climate compatible.
- The Forestry and Climate Change Framework for Action (FCCFA) is implemented.
- A review is conducted of the National Agricultural Development Plan including the allocation of forest land for agriculture leases.
- Strict design principles and criteria are developed for all REDD+ projects, taking strong action against any unauthorized voluntary trading schemes.

Many of these activities have already been commenced by GoPNG and will be continued with the support of a broad range of stakeholders, such as civil society organisations, the private sector and development partners. The FCCFA has already been approved and PNGFA is initiating the steps to implement it. A review of forest carbon rights is foreseen for 2011. REDD+ project guidelines and safeguard criteria have been developed by the REDD+ Technical Working Group and are currently being finalised based on stakeholder comments (see Annex 6). They include social, environmental and fiduciary safeguards to ensure REDD+ falls into the broader development objectives of PNG and takes into account social and environmental benefits beyond GHG abatement, and particularly addressing the rights of resource owners.

Land tenure and spatial planning are additional areas that will be addressed as part of PNG's REDD+ readiness programme. At the moment, PNG's capacity for land use planning at the local, provincial and national levels is limited. Spatial planning is therefore an important factor that enables the integration of REDD+ into consistent sectoral plans. This will need to recognise recommendations of the National Land Development Program and assess its impact on REDD+. At the local level, the Organic Law on Provincial and Local Level Government will need to be enforced in all REDD+ demonstration activities to make sure wards develop land use plans which are then to be incorporated to LLG plans, rolled in to district plans and eventually to Provincial Plans. The

demonstration activities will thereby inform longer-term policy enhancement in this area for REDD+, including land use planning at the national level, but at the same time require significant capacity building support as is already offered in some cases by civil society organisations in PNG today.

In addition, REDD+ requires a careful consideration of PNG's unique land tenure system. 97 percent of the land is under customary ownership and usually managed among landowners through Incorporated Land Groups (ILGs). The implementation of REDD+ activities will therefore also require a legal structure that clearly defines rights and responsibilities of landowners, potential project developers and GoPNG. The development of such a mechanism will build on the experiences in other sectors, e.g., FMA agreements in forestry and oil and gas projects, in order to guide land tenure considerations for REDD+ that protect the interests of forest resource owners and minimise the risk of disputes. Specific safeguards will need to be included in any such mechanism that address these needs and that offer a recourse mechanism in the case of disputes, as outlined in section 'C) Models for payment processing, benefit sharing and dispute resolution' below. As a first step in that direction, PNGFA, OCCD and DEC have started to assess an existing FMA area as a potential REDD+ pilot site. This assessment will include a review of current processes and regulations for FMA areas and their applicability to REDD+.

The outcome of the activities outlined above will inform the development of a climate change and REDD+ policy framework which the NCCC has asked the OCCD to start developing in 2011. Although the 16th Conference of the Parties to the UNFCCC (COP16) has made significant progress including the formal integration of a REDD+ mechanism into a COP decision, there are still significant uncertainties both regarding the details of the REDD+ mechanism as well as the overall funding available for both mitigation and adaptation measures. PNG's policy framework will aim at outlining very clearly PNG's priorities and institutional responsibilities in addressing climate change as an overarching framework for the alignment of the relevant sectors in the country. It will be the first step to comprehensive and detailed laws, regulations and policies to enable the implementation of REDD+. PNG's Climate-Compatible Development Strategy provides the fact base and prioritizes areas for immediate action and thus guides the policy formulation process.

C) Models for payment processing, benefit sharing and dispute resolution

Two critical decisions need to be made for the distribution of international REDD+ funds at the local level. First, how will funds be handled on a national level? Second, how will funds be used and distributed to pay for the costs of REDD+ activities and to compensate and incentivise local communities for potential livelihood changes?

There are many examples of benefit sharing at the local level, each with its own challenges and potential for improvement. These include the arrangements for mining, petroleum and forestry projects and conservation work. One of the most important challenges that GoPNG faces is to design a simple, transparent and equitable system for distributing and allocating REDD+ funds that learns from these examples. It is important that this system also takes into account the broader development perspective of PNG and also addresses other benefits alongside with GHG abatement in a holistic way. Besides ensuring the equitable distribution of funds, the mechanism will also need to structure incentives in such a way for all stakeholders as to minimise the risk of reversal and non-permanence.

The REDD+ Technical Working Group has finalised the Terms of Reference for a review and design study aimed at (i) reviewing the benefit sharing models and their implementation in existing sectors (e.g., mining and forestry) domestically and internationally, and (ii) designing the principles and framework for a model specific to REDD+ in PNG as a first step towards a REDD+ benefit sharing mechanism. It is envisaged that this study will be initiated in early 2011 with the support from development partners. The OCCD has approached AusAID to assess opportunities for co-funding through the PNG-Australia Forest Carbon Partnership.

This work on a benefit sharing and distribution mechanism will have to be matched with similar work at the national level to develop a transparent mechanism for GoPNG to receive and manage future REDD+ payments. This will include, amongst others, a system and institutional setup for fund administration, payment processing mechanisms including links to MRV, risk mitigation mechanisms, including permanence guarantee mechanism and the mitigation of timing risks through the use of structured financial mechanisms.

In addition, the system will need to include a simple and transparent dispute resolution mechanism that protects the interests of resources owners and avoids that disagreements escalate and endanger the objectives of REDD+ activities. Such a mechanism will cover disagreement over the distribution of REDD+ funds, but also disputes over land rights and claims, conflicting land use plans and other issues. The exact structure of a dispute resolution mechanism for REDD+ is still to be determined, and will consider both judicial and non-judicial elements. The system will address PNG's specific cultural heritage and customs and build on existing legal frameworks, e.g., the Land Disputes Settlement Act 1975 and the Oil and Gas Act 1998, as well as on the experience from civil society organisations from their work with communities (e.g., Peace Melanesia). It should also explore, for example, the concept of an Independent Environmental Land Court to ease pressure on the current system. As a first step, the OCCD will commission research and recommendations for the development of such a mechanism.

D) Communication and Stakeholder Engagement

The freedom and strength of civil society in PNG will be a key factor in determining whether forest carbon will be managed for the benefit of all of the citizens. An outreach programme to all stakeholders is therefore a critical element to ensure the success of REDD+ readiness efforts in PNG. To this end, the OCCD has initiated a comprehensive multi-stakeholder national consultation process. In the near term, this focuses on communicating and improving the CCDS. In the longer term, the consultation process has the following objectives:

- Build a local understanding of the facts of climate change, clearly communicate the proposed REDD+ strategy and building understanding of options for climate-compatible development that could form part of a national strategy;
- Gain an on-the-ground understanding of local needs and desires so that REDD+, mitigation and adaptation initiatives can be best tailored to meet them;
- Test community interest and willingness to participate in REDD+ schemes;
- Develop working relationships between the OCCD, local government, the private sectors and civil society;
- Empower local government to communicate the national strategy.

The OCCD has already started this process with workshops for GoPNG agencies and civil society organizations and consultation events in provinces. The NEC has foreseen PGK 4.5 million PGK (~USD 1.7 million) for these efforts over the period from 2011 – 2013, to be funded out of the GoPNG budget. In OCCD's budget for 2011, PGK 1.2 million are allocated to stakeholder engagement and consultation activities under the REDD+ & Mitigation and MRV & National Communication divisions, in addition to an in-kind contribution through staff time and general office resources of both division. It is envisaged that the UN-REDD NP and other development partners provide additional funding and international expertise into this important area, including a comprehensive stakeholder consultation plan for GoPNG and an independent review that monitors the implementation of the national consultation process in PNG. An overview of the OCCD's consultation activities for 2010-2011 is included in Annex 7.

E) Measurement, reporting and verification (MRV)

PNG will develop its national MRV system according to Decision 4/CP.15 (Methodological Guidance relating to REDD+) and the Decision on the Outcome of the work of the AWG/LCA of COP16. The national MRV system will be developed in phases and aims to establish a framework which will support a fully operational performance-based REDD+ mechanism within a time-frame of three years. An interim phase will be the establishment of a National REDD+ Information System (NRIS) to ensure that the implementation of REDD+ policies and measures are results-based.

Efforts are being made, particularly by PNGFA and UPNG, to increase the capacity for remote sensing and MRV in PNG. These are supported by development partners, most notably the Government of Japan/JICA with its comprehensive support to PNGFA for hardware and software for remote sensing. The UN-REDD NP provides a unique opportunity to complement these activities to develop a comprehensive MRV system for PNG and build the local capacity to operate it. The proposed NP therefore has a strong focus on this component which is outlined in more detail below. In order to ensure alignment of the different activities and stakeholders in progressing with an MRV roadmap for PNG, the OCCD organized an MRV workshop in February 2011 with the purpose of building collective awareness of on-going activities, highlighting potential for complementary and collaborative efforts, and, where possible, coordinating work plans and activities for more effective progress toward an MRV system for PNG.

3.3. Development of a Measurement, Reporting and Verification system

The development of an IPCC-compliant MRV system will be a key element to support REDD+ policies and measures and to assess PNG performance in climate change mitigation. Internationally, REDD+ is still under negotiation and possible accounting rules will have to be defined in the future. Nonetheless, existing guidelines and reporting requirements about the LULUCF sector for Annex I Parties under UNFCCC are sufficient to inform the establishment of a PNG MRV system at this point. This approach is considered to be conservative as the MRV systems under the Convention are comprehensive and inclusive of all possible land use activities. In this respect the MRV system of PNG (see Exhibit 10) will be composed of four main pillars:

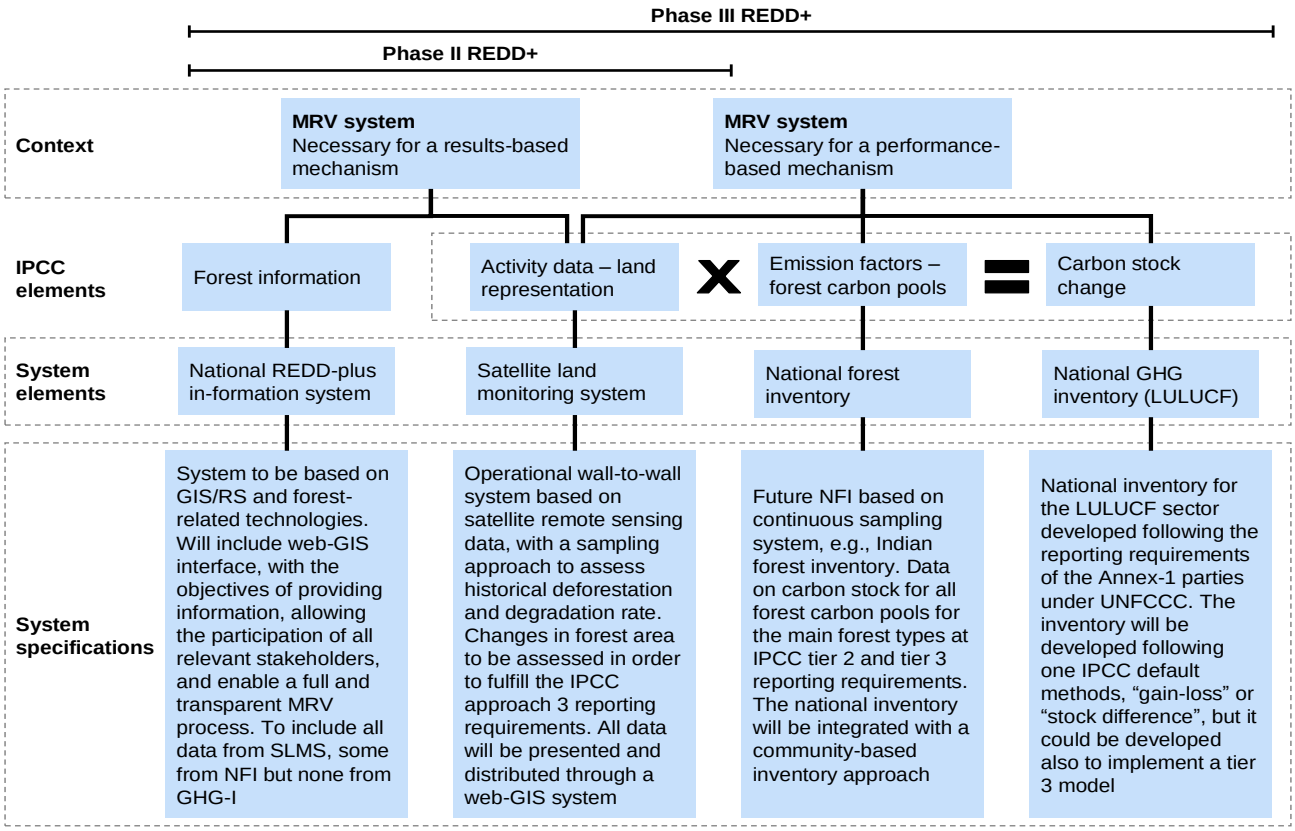
1) A Satellite Land Monitoring System to assess activity data, forest area and forest area changes;
2) A multipurpose National Forest Carbon Inventory to assess carbon stocks and carbon stock changes (i.e. emission factors - EF);
3) A National GHG Inventory to estimate and report anthropogenic emissions by sources and removals by sinks.
4) A National REDD+ Information System to share information (domestically and internationally) on all forest and REDD+ related issues, to allow the participation of all relevant stakeholders and to ensure that the implementation of national REDD+ policies and measures, including safeguards, are results-based.

These pillars will have to be supported by a responsible authority (or authorities) for the coordination of the administrative and technical aspects, for the overall quality of reported estimates to UNFCCC and for the fulfilment of procedural requirements and safeguards of REDD+.

PNG is going to develop a MRV system learning from other countries' experiences. The PNG system will combine inputs from already operational and successfully monitoring systems and build on the existing capabilities and resources in the country with the objective to develop, shift and align resources to institutions with capacity to deliver, and to meet the quality in compliance with set or accepted methods and standards. To achieve these objectives, the OCCD has already launched an international Request for Expression of Interest for its MRV system on 06 September 2010 as a first step in an open and transparent procurement process for the establishment of the individual system components. Building on existing resources and technical and financial assistance, this tender

process is envisaged to cover all aspects of a future MRV system, including software, hardware, and capacity building to enable PNG to independently and reliably operate its system in the long-term.

FIGURE 10 – The four basic "carbon-related" MRV elements



Institutional and governance arrangements

It is important to identify and develop an institutional structure that will be responsible to set up a National System.[23] The elements of the MRV system outlined above will form part of the National System that a country will establish in accordance with the LCA/Cancun Decision on REDD+. In the case of PNG, a number of institutions and GoPNG departments are today involved in activities related to the functions of a MRV system for LULUCF, e.g.

- **OCCD** is mandated by the NEC to develop and coordinate the national MRV system;
- **PNGFA** as responsible agency for the management of PNG's forests is overseeing the monitoring and surveillance of forest areas; **FRI** is the forestry research arm of PNGFA and operates a network of permanent sampling plots.

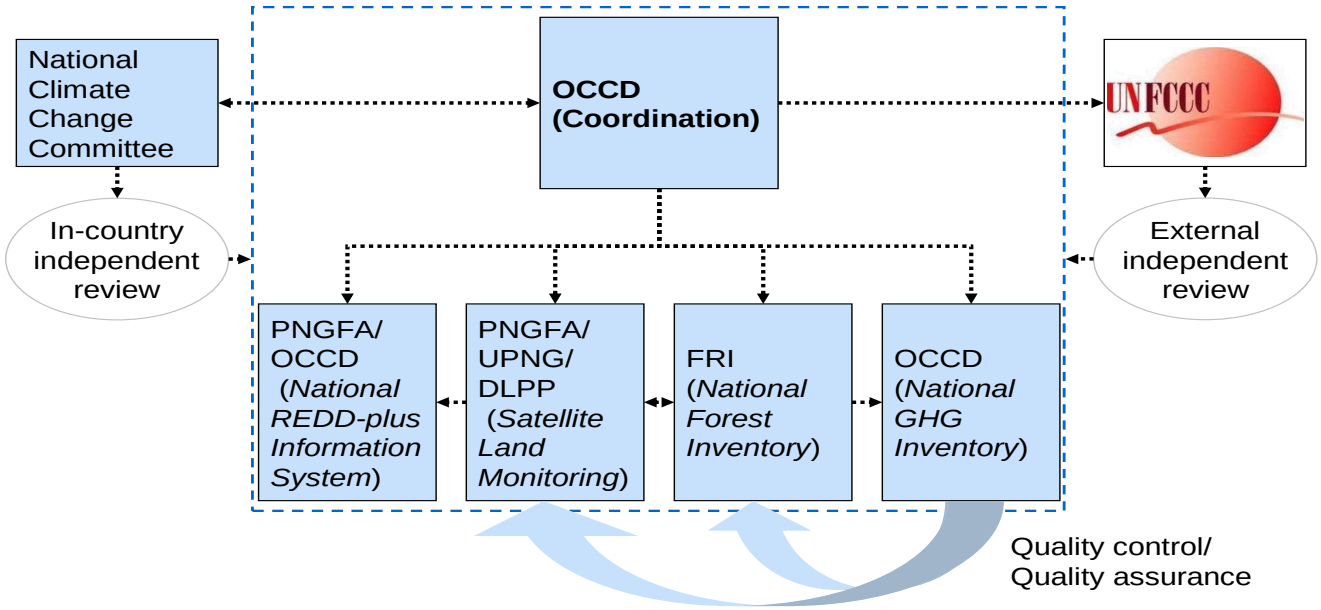
[23] The concept of National systems is explained in paragraph 9 of the Annex to Decision 19/CMP.1.: "National systems should be designed and operated to enable Parties included in Annex I to consistently estimate anthropogenic emissions by all sources and removals by all sinks of all GHGs, as covered by the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories and IPCC good practice guidance, in accordance with relevant decisions of the COP and/or COP/MOP." REDD-plus is a mechanism envisaged to require the full participation of national institutions in Non-Annex I Parties to the financial mechanism under the Convention (e.g. like Annex I countries under the Kyoto Protocol). Thus, it is expected that countries participating in REDD-PLUS will be required to set up such National systems.

- **DAL** is the central coordinating body for the agriculture sector including the planning and promotion of agricultural development and productive employment generation in the sector which may involve conversion of primary and secondary forest.
- **DEC** is tasked with the administration and implementation of the Environment Act 2000 to ensure good environmental protection and management and wise management of PNG's natural resources.
- **DLPP** is responsible for managing the alienated and customary land in PNG, including support for land use plans at the GoPNG, province and district levels.
- The **National Mapping Bureau** is responsible for providing Papua New Guinea, specifically also GoPNG, with mapping products and services.
- The **UPNG** Remote Sensing Unit is currently operating PNG's most advanced GIS system and supporting GoPNG in many of the tasks outlined above.
- The **Papua New Guinea University of Technology** (UNITECH) is mandated to build capacity in lands, surveying and forestry, involving research and training on GIS, remote sensing and biomass.

Accordingly, the institutional set up and organizational responsibilities will have to be clearly identified in order to clarify which institution is responsible for different aspects of the coordination of administrative and technical arrangements, the overall quality of reported estimates and the fulfilment of procedural requirements of REDD+. Strong coordination mechanisms will be required to ensure interaction between all stakeholders at a national and local level.

The final arrangement of organizational responsibilities will be determined through intensive GoPNG consultations and by the proposals received by interested parties in the international procurement process. Figure 11 outlines a potential structure, based on the current GoPNG responsibilities. All organizations involved will ensure the participation of local communities, NGOs, various agencies at national and international level and the private sector.

FIGURE 11 – Potential PNG System for MRV under the UNFCCC



- The **Office of Climate Change and Development** is responsible for the development and coordination of the administrative and technical aspects of the MRV system, hosts the national GHG inventory and reports net GHG emissions to external parties, e.g., National Communications to the UNFCCC;
- The **Forest Research Institute** operates the National Forest Inventory;
- The PNG Forest Authority, the Department of Lands and Physical Planning and the Office of Climate Change and Development, as well as other relevant departments manage the Satellite Land Monitoring System;
- The **National Climate Change Committee** acts as auditor and reviewer to the National GHG Inventory and commissions regular independent in-country audits to verify the transparency, accuracy, consistency, comparability and completeness of the submitted data.

REDD+ activities and phases and their relation to MRV

Five forest related activities have been identified under REDD+:[24]

(i) Reducing emissions from deforestation;

(ii) Reducing emissions from forest degradation;

(iii) Conservation of forest carbon stocks;

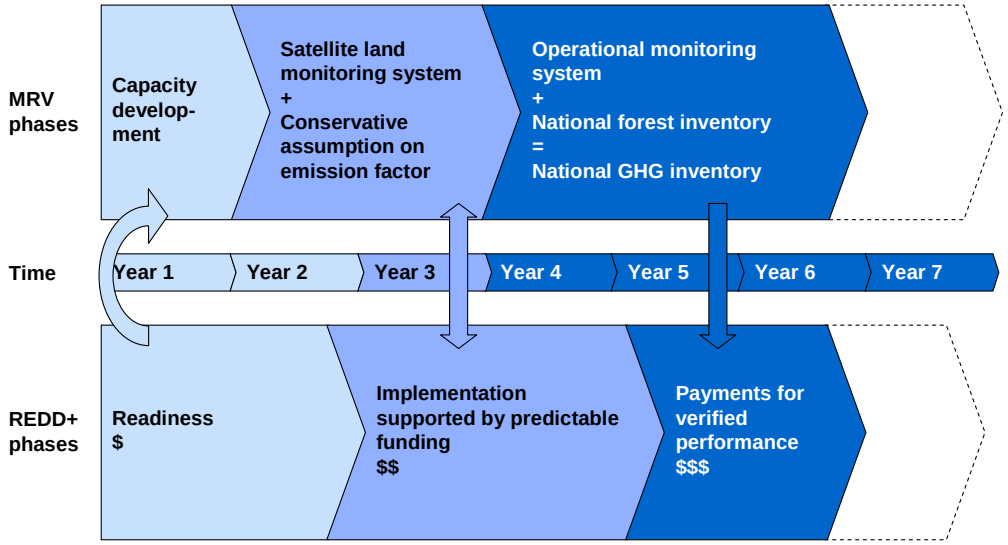
(iv) Sustainable management of forest;

(v) Enhancement of forest carbon stocks.

This broad prospective has been agreed in order to reflect all potential different national circumstances (e.g. countries with high forest cover and high deforestation; countries with high forest cover and low deforestation; or countries which are expanding their forest area and their carbon stocks), but also to support a phased implementation of the expected REDD+ mechanism. Indeed, countries may start with the implementation of policies and measures to tackle emissions from deforestation and forest degradation, and later on add other mitigation actions like sustainable management of forests, conservation and enhancement of forest carbon stocks.

[24] FCCC/AWGLCA/2009/L.7/Add.6

FIGURE 12 - Multiphase implementation of REDD+ through MRV



The roadmap for developing a MRV system in PNG would at all stages accompany and support REDD+ readiness efforts, as outlined in the CCDS and the Interim Action Plan. The REDD+ process would follow through 3 broad stages:

- **Phase 1 - Readiness**: Capacity development for the establishment and testing of the national MRV system. In this phase, PNG will assess its historical forest area and carbon stock changes;
- **Phase 2 - Implementation supported by transitional funding**: Operational National REDD+ Information System with intermediate operational functionality of the Satellite Land Monitoring System and National Forest Inventory (pre-sampling data for conservative estimates of EF);
- **Phase 3 - Payments for verified performance**: Fully operational national MRV system. Integration of REDD+ activities with other mitigation mechanisms under UNFCCC.

The MRV system will enable identification and tracking of actions and processes that are related to the five activities identified under REDD+ and implementation of the most recently adopted or encouraged IPCC methodological approaches. The MRV system will also be the tool that will support the Forest National Information System that PNG will establish in order to provide and share information on the REDD+ safeguards (Annex I of Decision LCA/CP16)

Even if the 2006 IPCC Guidelines are not yet adopted by the UNFCCC these will form the methodological base of the proposed national MRV system on GHG emission and removals since they are the most updated guidelines produced by the IPCC and are fully consistent with the 2003 IPCC Good Practice Guidance for LULUCF, currently adopted for reporting GHG Inventories. The estimation of GHG emissions and removals will be based on two activities: (i) identification of activity data through a satellite monitoring system and (ii) assessment of emission factors through field measurements.

The National REDD+ Information System

A National REDD+ Information System will be set up to provide information (domestically and internationally) on how the safeguards referred to in annex I of the Cancun decision on Outcome of AWK/LCA are being addressed and respected throughout the implementation of all the REDD+

activities and all the forest-related issues. This information system will be PNG's central access point for information related to forests and REDD+. It will also be the key element to allow the participation of all relevant stakeholders and to ensure that the implementation of national REDD+ policies and measures, including safeguards, are results-based. To ensure that the system operates in a transparent way and that the type of information shared through the system is clearly defined, a legal act to empower the REDD+ Information System to collect and publish data should be considered, including aspects such as freedom of information and other supporting mechanisms.

The information on some REDD+ safeguards (e.g., transparent and effective national forest governance structures; respect for the knowledge and rights of indigenous peoples and forest resource owners; and actions that complement or are consistent with the objectives of national forest programs and relevant international conventions and agreements) will be provided through an effective and transparent access to government acts and decisions, as well as through independent reports and analyses realized by NGOs and independent organization. It will also include PNG's REDD+ project guidelines that provide environmental, social and fiduciary safeguards (see Annex 6) and information on how those are applied in the evaluation of demonstration activities.

The REDD+ Information system will also be integrated with some component of the National MRV System as some of the REDD+ safeguards (e.g., actions to address the risks of reversals; actions to reduce displacement of emissions, and the conservation of the natural forest) will require monitoring activities in order to be able to provide information on their implementation, while at the same time protecting the rights of affected stakeholders, including logging operators. The emphasis on participatory approaches for forest management will greatly contribute to this effort. In that respect the REDD+ information system will publish reports of forest assessments by local communities and on the integration of their plans with the national REDD+ policies and measures.

To address the safeguards on "the full and effective participation of relevant stakeholders, in particular, indigenous peoples and local communities" the information system will be an open access database with a web-portal interface to facilitate the access to the information. The system will also include a web-GIS interface which will allow the sharing of geo-spatial data among relevant stakeholders and facilitate the development of a fully transparent REDD+ process. One potential solution for the WEB-GIS interface could be an advanced version of the TERRAMAZON system developed by INPE (Brazilian Space Agency). The system would be based on open-source software (e.g., PostgreSQL and Google Android applications).

The Satellite Land Monitoring System

To assess activity data, a Satellite Land Monitoring System (SLMS) will have to be set up in PNG, along with the capacity to operate it. The system will leverage existing capacities within GoPNG and UPNG. It will be developed as a whole-of-government system with support from different development partners, notably JICA's technical assistance to PNGFA and the UN-REDD National Programme. The SLMS will:

- **Detect land use changes** (changes among different land uses categories) and forest canopy changes in forest land remaining forest land.
- **Be operational**, i.e. it will allow full territory coverage by high resolution satellite data with a seasonal temporal frequency of a minimum of 2 Landsat class data per area unit per year;
- **Allow for frequent monitoring**, i.e. it will enable the monitoring of forest disturbance processes in frequent intervals through medium resolution satellite data, complemented by more detailed imaging for high-risk areas, with the ultimate intention of developing UNFCCC tier 3 capability;

- Monitor **in accordance with the forest definition** that PNG will adopt under REDD+, and parts of which have already been developed as part of the consultation under the FCCFA;

Each unplanned change of land cover detected by the SLMS will then need to be controlled on the ground in order to assess changes and identify causes and actors. Furthermore, GoPNG will need to design a framework for remedial actions through PNGFA and other authorities for cases when undesired changes in land cover are detected, and will guide in the implementation of those actions. Enforcement mechanisms will require considerable attention to be effective.

An ambitious, illustrative output of the SLMS in terms of reporting requirements is shown in Figure 13 below. The final matrix or matrices will be developed as part of the NP and related efforts in PNG, and will build on existing approaches in PNG:

- An annual land use change matrix, for reporting on land use changes processes
- An annual conversion matrix, for reporting on changes in land practices between each land use sub-categories.

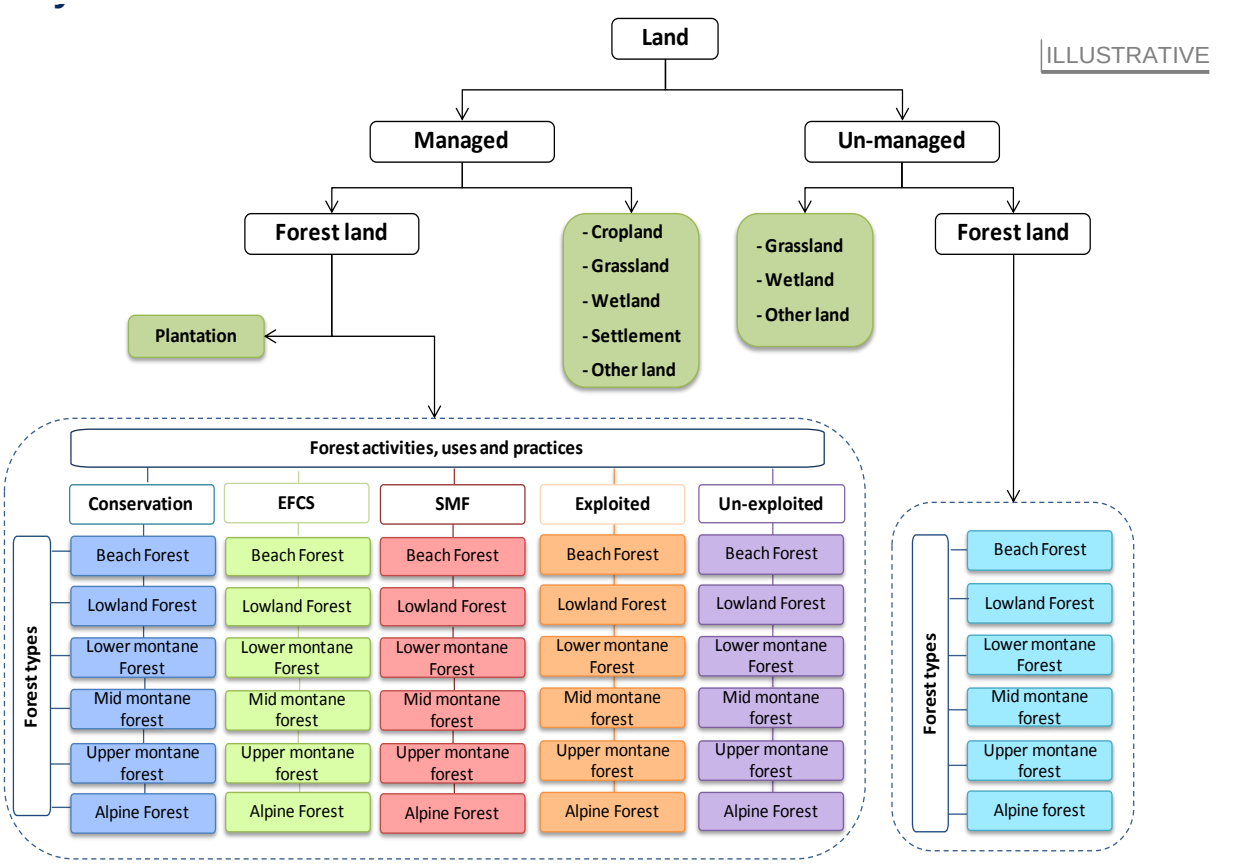
FIGURE 13 – Example of a possible PNG land use change matrix and practices conversion matrix

ILLUSTRATIVE

Final \ Initial	FL Alpine	FL Upper montane	FL Mid montane	FL Lower montane	FL Lowland	Grass Land	Beach forest	Crop Land	Wet Land	Settlement Land	Other Land	Final Area (T1)
FL Alpine	51					15						61
FL Upper montane		60										60
FL Mid montane	25		50			35		13				123
FL Lower montane				26								26
FL Lowland					20	15						35
Grass Land						10						10
Beach forest						2	10					12
Crop Land								29				29
Wet Land									0			0
Settlement Land								5		15		20
Other Land											5	5
Initial Area (T0)	76	60	70	26	20	89	10	47	0	15	5	460
Net change (Δ = T0-T1)	15	0	-53	0	-15	79	-2	18	0	-5	0	0

Final \ Initial	Degraded Burning	SMF	Conservation	Exploited	Unexploited	Final Area
Degraded Burning	4					4
SMF		5	6			11
Conservation			0	4		4
Exploited				1		1
Unexploited					12	12
Initial Area	4	5	6	5	12	47
Net Change	0	-5	2	1	0	0

FIGURE 14 – Potential land use classification/stratification system for PNG's national territory



As the forest area of a country is not homogeneous in terms of species composition, management practices, (e.g. unexploited, under sustainable management, conservation, etc.) and ongoing and future drivers of carbon stock changes (e.g. drivers of deforestation), PNG will develop a stratification of its forest land area in order to identify and track different portions of land with different biophysical properties and subject to different policies, measures and activities. Within a single stratum, different activities and institutional arrangements related to forest carbon stocks management will be identified, producing a further, more detailed sub-stratification. An example of such a system is shown in Figure 14 above

For each different stratum and/or sub-stratum technical and methodological arrangements aimed at achieving the highest quality estimates in a cost-effective manner will be implemented; at this scope all on-going local monitoring activities will be taken into account or directly included in the GHG inventory system while the national monitoring activities verify the local estimates.

National Forest Carbon Inventory

For the assessment of the forest emission factors, the preparation of a multipurpose national forest inventory is key. The main objective for PNG will be the establishment of a country-specific emission factors database reflecting the different forest types in order to support an assessment of carbon stock changes at tier 2 of IPCC guidelines for phase 2 and tier 3 for phase 3 of REDD+.

PNG's national carbon forest inventory will build on existing research results which have provided indications on PNG's forests (e.g., permanent sampling plots network, ITTO 1992 or ACIAR project FST98-118, Planning methods for sustainable management of timber stocks in Papua New Guinea).

As in many cases, existing research and sampling plots had a different focus from the objectives outlined here, these efforts need to be assessed and complemented to meet the requirements of the multipurpose national carbon forest inventory. Accordingly, a significant portion of the support envisaged through the UN-REDD NP and other programs will focus on capacity building and training of the relevant institutions, particularly FRI but also other GoPNG and non-governmental organisations (e.g., WWF) that are already doing work on related topics today.

The inventory will have two phases: i) pre-sampling, and ii) final sampling. It will be based on the principle of optimum allocation of resources. During pre-sampling, preliminary statistics of different forest strata will be assessed. These preliminary statistics will be used to define the final sampling strategy but also to produce conservative estimates of emission factors which will support the implementation of REDD+'s phase 2 (i.e. tier-2 reporting). One of the main objectives of the national forest inventory will be to assess with high accuracy all the forest-related emission factors. Previous analysis on the already existing field forest data indicates that most probably, the number of field plots that it will be necessary to collect is between 1,000 and 2,000. The exact number will be defined at the pre-sampling phase.

GHG estimates of a National GHG Inventory

In order to assess estimates of GHG emissions and removals, countries have to compile a national GHG inventory which is then reported to the UNFCCC Secretariat. In PNG, this function will be assumed by the new Office of Climate Change and Development.

PNG's national GHG inventory will be constructed following the methodologies developed by the IPCC in its 2006 Guidelines. The initial objective will be to report GHG estimates at Tier 2 in two to three years, but the GHG inventory unit will aim at reaching Tier 3 around 2020.

A key function of the office responsible for compiling the national GHG inventory is quality assurance and quality control (QA\QC) of data and methods. The OCCD will therefore work as the national entity in charge of verifying data provided by the other two MRV components: the SLMS and the NFI. These functions will be carried out following IPCC guidelines on quality control (QC) and quality assurance (QA).

In order to ensure the transparency of the entire MRV process, all data PNG will use in its national system will be publicly available through a web-based portal. The land data from the SLMS will be distributed through a WEB-GIS system.

MRV Control Service

In addition to the technical components of the MRV system above, ensuring that all technical and institutional arrangements related to REDD+ in PNG are implemented is a critical component of the overall system. The OCCD will therefore closely work with the National Climate Change Committee to ensure that the necessary technical capacity for establishing an MRV system and for the design and implementation of REDD+ related policies, measures and activities, is developed.

The NCCC will therefore commission regular audits, to be carried out by an independent third party, to monitor progress in system development and to verify the results of the REDD+ activities. It further ensures that policies, measures and activities implemented for REDD+ respect relevant safeguards and are compliant with PNG's development plans.

3.4. REDD+ related initiatives in PNG

In PNG, a number of activities by GoPNG, development partners, civil society organisations and the private sector are already under way, aiming at furthering PNG's progress on REDD+ readiness and field testing. PNGFA, for example, is preparing 4 pilot projects to support the FCCFA. The projects are covering each of PNG's 4 regions and target Reduced Impact Logging, Afforestation/ Reforestation, Sustainable Forest Management and Conservation. To ensure coordination among the various activities, the NCCC discusses and decides on GoPNG's activities to address climate change. The multi-stakeholder REDD+ TWG and its sub-working groups act as fora to coordinate and progress REDD+ activities (REDD+ readiness and pilot activities) with the participation of non-government stakeholders. The Joint GoPNG – Development Partner Forum on Climate Change (FCC) ensures that GoPNG and donors have an opportunity to exchange views and coordinate climate change efforts on the ground. Specific initiatives in PNG include the following:

Papua New Guinea – Australia Forest Carbon Partnership

The Prime Ministers of Australia and Papua New Guinea established the Papua New Guinea-Australia Forest Carbon Partnership on 6 March 2008. Under this Partnership, Papua New Guinea and Australia have agreed to cooperate in three main areas: policy dialogue on national and international REDD+ policy; increase PNG capacity in forest carbon monitoring and assessment; and cooperation on participation in international carbon markets, including on REDD+ demonstration activities. As announced at the PNG-Australia Madang Ministerial Forum, Australia is contributing up to A$3 million in initial funding which will include technical, scientific and analytical support for the design of Papua New Guinea's carbon monitoring and accounting systems. This Partnership represents one of the support windows under the Australian Government's A$273m International Forest Carbon Initiative (IFCI).

Australia has worked with the GoPNG to identify an initial package of assistance under the PNG-Australia Forest Carbon Partnership. It aims to:

- Build the capacity of GoPNG institutions to articulate and implement national climate change policies that meet relevant international standards;
- Build the capacity of GoPNG and other relevant institutions to develop a robust national carbon monitoring and accounting system;
- Support GoPNG to engage in international dialogue on REDD+.

GoPNG has requested that the Forest Carbon Partnership work plan be updated which is under consideration by officials. It is envisaged that the updated work plan would complement the REDD+ readiness efforts covered under the National Programme by lending support to areas that are not comprehensively covered in the NP.

Other IFCI windows of direct relevance to PNG are:

- An allocation for NGOs to develop concepts for demonstration activities to inform the development of a national REDD+ framework—this work is nearing completion, with four of the five NGO concepts presented to the Government of Papua New Guinea in July 2010;
- The Asia-Pacific Forestry Skills and Capacity Building Program which commenced in 2007 to assist countries in the Asia-Pacific region increase their forest management expertise and improve carbon sequestration performance of their forests. Phase II, for which PNG is a priority country, seeks to build regional capacity for delivering sustainable forest management in support of REDD+ efforts. Project activities will address the following objectives:
  - Improving capacity to provide support for sustainable forest management and improved forest governance, law enforcement and regulatory frameworks that assist efforts to REDD;

- Building the institutional and technical capacity needed to deliver sustainable forest management that supports REDD;
- Adaptive and effective program, partnership and knowledge management.

A project is currently under negotiation with GoPNG, through the PNGFA to support development of a forest management Decision Support System (DSS) to assist PNGFA with forest management and planning of operations in support of sustainable forest management.

Australia – PNG Kokoda Initiative

The Australian and PNG governments have signed a Joint Understanding to work together to protect the Kokoda Track and Owen Stanley Ranges and improve the lives of communities living along the Track corridor through the Kokoda Initiative. While the Kokoda Initiative is not a REDD+ initiative, it may explore opportunities for 'forest carbon' amongst other income generation and development activities that it will facilitate for the local landowners of the Kokoda Track and Brown River region. This will involve utilization of GIS and satellite imagery to assess and monitor forest carbon emissions and may therefore support activities aimed at developing an MRV system for REDD+ in PNG under the UN-REDD NP and other support programs. DEC is building capacity to support this activity.

Global Environment Facility (GEF) Support for Sustainable Forest Management

PNG is developing a Forest and Coastal Conservation and Natural Resource Management project with the assistance of UNDP, as an element of the GEF's Pacific Alliance for Sustainability, specifically under the Forestry and Terrestrial Protected Areas component. The objective of the project will be to develop and demonstrate resource management and conservation models for landholding communities that effectively incorporate community conservation areas. The key outcome will be the extent of high conservation value terrestrial and marine area which is brought under community-based conservation and protected areas at targeted sites. PNG has received an allocation under the GEF STAR program. It is envisaged that a portion of this allocation will be used to strengthen initiatives under the GEF-5. DEC has prepared Project Initiation Facility proposal.

GEF's support to PNG also includes a project on capacity building for sustainable land management which will be relevant for aims to strengthen human and institutional capacity at all levels to mainstream Sustainable Land Management. This will be achieved through improving the information basis of characterising the state of land degradation and its impact, raising awareness at various levels of government agencies, improving individual knowledge and skills, improving institutional structures and processes to maximise coordination, mainstream Sustainable Land Management into government's development planning processes, and incorporating the use of mainstreaming tools in decision making.

ITTO Project Proposal 'National Training Program to Promote the Adoption of Reduced Impact Logging (RIL) in Papua New Guinea'

The PNGFA and the Tropical Forest Foundation have submitted a project proposal to the International Tropical Timber Organization (ITTO) for a 2-year program aimed at developing the capacity to understand, implement and regulate the adoption of RIL practices at the government and concession level among the medium to large scale forest operations in PNG. The project seeks to achieve these objectives by establishing a comprehensive training program to be developed and implemented in three pilot forest concessions. The project will also provide refresher training for all field staff of the PNGFA, Field Services Directorate to strengthen their monitoring and reporting capabilities.

Government of Japan & Japan International Cooperation Agency (JICA)

With the support of a PGK 20 million (700 million yen) grant from the Japanese government, PNGFA is aiming to improve its forest monitoring and data management system using remote sensing and GIS/database capabilities. The grant comes under the forestry preservation program (FPP), and was signed by the Government of Japan and GoPNG on March 19, 2010. The main objectives of the project, which focuses on software and hardware equipment, but includes training of staff from all relevant collaborators, are:

- Update the forest resource information of the country;
- Strengthen institutional and capacity building of the PNGFA and other collaborators in assessing changes in forest cover;
- Support PNG's capabilities to report its GHG emissions to UNFCCC.

The funds will be used to procure equipment and soft (non-physical) components which may include:

- The Japanese Aerospace Exploration Agency (JAXA) remotely sensed data (ALOS Satellite Imagery) and other remote sensing data;
- ALOS Satellite Imagery
- Geographical Information System (GIS) related equipment, computer hardware, software/licensing & software upgrading;
- Ground truthing instruments; and
- Training in the use of GIS and Remote Sensing using satellite imagery;
- Training PNGFA staff on the Global Positioning System (GPS);
- Training in field data collection and data processing;
- Training of all related data management in database manner.

It is envisaged that as much as possible existing facilities (e.g. the UPNG Remote Sensing Centre) be strengthened and upgraded to build local capacities in GIS/Remote Sensing interpretation. In addition, JICA is providing capacity building for officers from the collaborating institutions, particularly PNGFA, FRI, UPNG, Unitech and OCCD, amongst others on Forest Resource Monitoring for Addressing Climate Change.

GoPNG and JICA also agreed to set up a Technical Cooperation Project from 25th March 2011 stationed in PNGFA aiming at enhancing capacity of relevant institutions in PNG for monitoring nation-wide forest resource including carbon. A full-time JICA technical adviser on forest management is attached from the outset of this project. This project will be implemented in close coordination and accordance with the grant mentioned above from the Government of Japan.

It is envisaged that the UN-REDD Programme components focusing on MRV and the JICA assistance will be closely coordinated through regular meetings and exchange to ensure efforts are complimentary to each other.

European Union

The European Union (EU) is currently funding activities of UPNG aimed at supporting PNGFA in inventory techniques as well as upgrading the forest inventory mapping system. In addition, it is foreseen that two REDD+ related projects are launched in 2011. One will contribute to remote

sensing forest degradation. A second project will focus on improving the productivity and quality of teak plantations in PNG, thereby contributing to afforestation/reforestation efforts.

Moreover, the EU has also been initiating discussions with Papua New Guinea's stakeholders in view of informing of the possibility for implementing a Forest Law Enforcement, Governance and Trade (FLEGT) mechanism.

Finally, additional funds may further be allocated to the sector depending on identification processes to be carried out in 2011.

Civil society organisations

A number projects that are relevant to REDD+ and readiness activities are already being undertaken by local and international NGOs throughout PNG. These projects currently focus mostly on forest conservation and environmental and biodiversity protection and can provide important lessons learned on community engagement, land tenure issues, and community project management in PNG, among many others. It is envisaged that the experiences and learnings from these activities will be incorporated into the REDD+ readiness process and that the existing activities will be leveraged to test and refine concepts for REDD+, e.g., a benefit sharing mechanism. DEC and OCCD have already established links with many of these projects and in many cases, representatives of the implementing organisations are represented on the REDD+ Technical Working Group. In mid-2010, AusAID has supported 4 NGOs (Conservation International, Live & Learn, The Nature Conservancy and the Wildlife Conservation Society) to develop concept notes on potential community-based REDD+ demonstration activities. Next steps for these ideas are currently under discussion. Additional ongoing activities include, for example, NORAD's support to the Foundation for People and Community Development (FPCD) for REDD+ community-based initiatives, and the Eco-Forestry Forum's (EFF) REDD+ road show to raise community awareness. One road show consultation event was already held jointly between EFF and OCCD.

3.5. The proposed National Programme

The proposed National Programme builds on the Interim NP draft developed in 2009 and has been updated to reflect progress on PNG's REDD+ readiness efforts over the past 12 months. It will support the relevant institutions, notably the OCCD, PNGFA and others, in furthering PNG's preparatory for REDD+ and help develop the capacity to sustainably implement and sustain a REDD+ framework in PNG. The NP will place strong emphasis on enhancing PNG's capacity and technical infrastructure to effectively measure, report and verify changes in net GHG emissions from activities related to REDD+ and will thereby contribute in a coordinated manner to some elements of PNG's larger integrated REDD+ readiness approach.

MRV features as one of the immediate priorities in the CCDS and Interim Action Plan, and it is a critical enabler for PNG's participation in international REDD+ systems. PNG's national MRV system will be a multifunctional instrument, serving as a guide for social, economic and environmental policies and providing information about forestry-related fields, such as biodiversity, and supporting the monitoring of the REDD+ safeguards[25]. The activities under the proposed National Programme will be closely tied into the broader REDD+ readiness efforts that GoPNG supports with its own resources, and with the help of other development partners.

3.6. Sustainability of results

Over the past year, PNG has made significant progress in building the institutional framework and developing the capabilities to effectively prepare for and manage REDD+ activities in the country. All activities proposed under the NP will be embedded in this framework and are concentrating on

[25] FCCC/AWGLCA/2009/17 available at: http://unfccc.int/resource/docs/2009/awglca8/eng/17.pdf

the priorities emphasized in PNG's draft CCDS and Interim Action Plan. It is therefore ensured that the NP contributes to the longer-term strategy, framework and priorities that GoPNG is committed to pursue.

In addition, by anchoring the institutional responsibility for the success of the NP in existing institutions and committees, notably the OCCD and the REDD+ Technical Working Group for Programme Management, and the National Climate Change Committee for the Programme Executive Board, the NP actively contributes to embedding the results in a broader framework that will last beyond the NP's implementation period. This is further strengthened by helping to build additional capacities in the areas of REDD+ readiness and MRV to achieve this goal.

3.7. Links to the UN Country Programme

The UN Country Programme for PNG was one of the world's first Joint UN Country Programmes when it was signed in mid-2007. It introduces new ways of provision of assistance that are in line with the ongoing UN Reform as well as the Paris Declaration on Aid Effectiveness. The overall aim is to simplify and harmonize the way the UN works at country level and to ensure that the UN Country Programme is aligned with and in support of national priorities and that national systems and procedures are utilized for programme delivery which reduces transaction cost significantly.

The UN Country Programme is themed 'Partnership for Nation Building' and encompasses five broad developmental outcomes:

- Governance and Crisis Management - Government develops and implements effective governance and crisis management policies;
- Foundation for Human Development (Health, Education and Child Protection) – By 2012, children, youth, women and men benefit from basic quality health, education and protection;
- Sustainable Livelihoods and Population - By 2012, rural communities in selected provinces of each region use improved sustainable livelihood practices;
- Gender - By 2012, women and girls experience fewer gender inequalities in PNG;
- HIV and AIDS - By 2012, the rate of HIV and AIDS infection is halted or reduced and government provides services to those people with, and affected by, HIV and AIDS.

This NP is one of three programmes under the Sustainable Livelihoods Programme developed to achieve the following Intermediate Outcome: *"Communities apply national policies and regulatory frameworks to implement environmentally sustainable livelihood opportunities, including community based ecotourism, non-timber forest products, sustainable agriculture and ecoforestry."* The proposed UN-REDD NP supports the activities required to achieve the outcome, and particularly the output "*Office of Climate Change has the capacity to develop climate change policy and coordinate activities to address initiatives on climate change*" by supporting the GoPNG's efforts to build the capacities needed to effectively develop climate change policy and coordinate activities to address initiatives on climate change.

4. Results Framework

The main objective of this NP is to ensure that by 2013, PNG has an operational Measurement, Reporting and Verification system that enables the country's participation in international REDD+ systems. This will be an essential prerequisite to securing funding and gaining international support for REDD+ activities that protect PNG's environmental resources and contribute to sustainable livelihood practices of rural communities.

The activities under the NP are an important contribution to PNG's REDD+ readiness efforts. Yet, they form only one component of PNG's overall REDD+ readiness activities which will be jointly implemented by GoPNG and non-government stakeholders with support from a number of development partners, as also outlined in section 3.2. The UN-REDD NP contributes US$5.97 million (excluding indirect support cost) to a total REDD+ readiness programme amounting to ~US$21 million.[26] This programme also includes contributions from GoPNG and other development partners. JICA, for example, supports the development of an MRV system with US$7 million, as described in section 3.2. In other areas, GoPNG is discussing opportunities to include components under development partner programmes, e.g., the benefit sharing & distribution framework study under the PNG-Australia Forest Carbon Partnership.

FIGURE 15 – Overview of readiness actions and cost (US$ millions)

	Components	Total	GoPNG	UN-REDD	Other co-financing[1]
 **Institution & capacity building**	▪ Workshops ▪ Training programs ▪ Secondments	4.29[2]	1.30	0.44	2.55
 **Strategy & policy development[3]**	▪ Finalisation of CCDS ▪ REDD+ policy framework ▪ Review of agricultural lease process ▪ Dispute resolution mechanism	2.75	1.10	0.65	1.00
 **Payment processing & distribution[4]**	▪ Benefit sharing & distribution ▪ Payment processing/fund management	0.25			0.25
 **Consultation & communication**	▪ National & provincial consultation ▪ Awareness building ▪ Climate change education	1.98	1.70	0.28	0.00
 **MRV**	▪ Complete system ▪ Training	11.60		4.60	7.00
Total		**20.87**	**4.10**	**5.97**	**10.80**

1 Actions are under way in order to receive financial support from other development partners
2 Does not include all capacity building programs that will be included in other pilot and readiness activities to avoid double counting
3 Land tenure & land use planning and dispute resolution efforts not yet included; IWG-IFR global average funding need amounts to ~USD 20 million
4 Only includes benefit sharing & distribution framework; IWG-IFR global average funding need amounts to ~USD 3 million

[26] Land tenure, land use planning and payment processing are not yet included as detailed estimates in the total. IWG-IFR global averages for these 3 areas total approximately US$23 million.

The envisaged outcomes of the UN-REDD NP as outlined below will be closely tied into this broader set of REDD+ readiness activities and will be implemented with the additional support of AusAID, JICA and other development partners. The NP will also be closely linked to other programmes and initiatives that are related to or have implications on REDD+, such as biodiversity protection (e.g., under GEF and food security programmes.

Capacity building will be a cross-cutting theme across all outcomes and will address the relevant stakeholders needs for each NP outcome. To ensure that capacity building will be carried out in a coordinated and targeted way, the specific needs of stakeholders in PNG will be identified through a capacity gap assessment for each specific outcome envisaged under the NP. Wherever the NP involves the participation of landowners or resource owners (for instance during pilot program development or MRV plot measurement), the activities will be subject to the principles of Free, Prior and Informed Consent (FPIC), a principle that will be adhered to also in other REDD+-related activities that do not form part of this NP.

Outcome 1 – Readiness Management Arrangements in Place

The UN-REDD NP will support the GoPNG, particularly the OCCD and other partners of the UN-REDD NP (e.g., PNGFA), in furthering its capacities and advancing REDD+ readiness activities. The outcome builds on and complements the efforts of GoPNG outlined above. Indicative activities contributing to this outcome will include:

Output 1.1: Management arrangements between GoPNG and stakeholders strengthened

- Assistance to the OCCD, PNGFA and others for liaising with other REDD+ initiatives and linking the NP to additional programmes;
- Annual NGO and Whole-of-Government workshops for the further development of REDD+ readiness concepts and capacity development.

Output 1.2: NP implementation strengthened

- Strengthening of the National Programme through the support of a NP manager who reports to the OCCD as coordinating entity but closely works with all partners involved in the implementation of the NP;
- Facilitation of exchange and knowledge sharing with other UN-REDD countries

Both support positions will be fully embedded into the OCCD's line organisation and hired by the OCCD to ensure GoPNG ownership of the NP and capacity building in programme management.

Outcome 2 – National MRV system developed

The core of the NP will focus on the establishment of a measurement, reporting and verification system for net GHG emissions from LULUCF through an open and transparent international procurement process. Activities under this outcome are preliminary and may change based on the ongoing Expression of Interest process for a PNG National MRV system which will help to shape the design and setup of a National MRV system in PNG. The system will build on existing components for MRV in the country and develop and strengthen capabilities in a whole-of-government approach. It will be designed in such a way that sustainability, including continuous refinement of the system of regular training of operators is institutionalised and ensured beyond the UN-REDD NP's support. Support under the UN-REDD Programme will complement the activities funded by other donors, particularly the assistance provided by the Government of Japan as outlined above, and it will draw on additional resources for support and capacity building This includes, for example, the existing support for GHG inventory work in PNG through the Second National Communication and potential

training on GHG inventory methodologies for the land-use sectors through efforts led by the US Environmental Protection Agency. Indicative activities under this outcome are:

Output 2.1: National REDD+ Information System developed

- Establishment of a national REDD+ information system the scope and structure of which will be defined through a consultative process (e.g., through stakeholder workshops) and which will be based as much as possible on existing sources of information; this activity will include:
  - System and function design;
  - Development of a national database;
  - Development of a WEB-GIS interface to make available the information system via internet;
  - Training of PNG operators.
- Field testing of safeguards based on PNG's REDD+ guidelines and international best practice, e.g. efforts under UN-REDD's Global Programme.

Output 2.2: Satellite Land Monitoring System set up

- Establishment and training for an operational wall-to-wall satellite monitoring system that allows PNG to report LULUCF activity data and supports national and sub-national REDD+ implementation, including development and implementation of
  - Methodologies to assess land use and land use changes using Landsat class data;
  - Real-time methodologies to monitor canopy cover changes, deforestation and active fires;
  - A GIS platform and web-GIS portal for data visualization and distribution.

Output 2.3: Multipurpose national forest carbon inventory developed

- Establishment of and training for a multipurpose national forest inventory in line with UNFCCC reporting requirements that builds on and expands existing efforts to measure carbon stocks, e.g. the existing permanent sampling plot system by FRI.

Output 2.4: National GHG Inventory for REDD+ established

- Development of a National GHG Inventory focusing on the development of the institutional capacity within GoPNG to carry out this function, and specifically addressing the area of REDD+.

Output 2.5: Technical advice, capacity building and implementation support provided

- Technical advice and capacity building to carry out the activities above, also including a transparent mechanism for quality assurance and control of the MRV system and the data generated;
- Institutional support to GoPNG partners and stakeholders of the MRV system to enhance domestic capabilities related to an MRV system and the reporting of net GHG emissions; specifically support to the OCCD through the secondment of a 'technical assistant' to the OCCD Director MRV & National Communication who would provide content, meeting management and process management support to the Director and act as coach (*see also Annex 3*).

In order to ensure a consistent, whole-of-government approach that also fully integrates non-governmental stakeholders, the development of the system will commence with a 2-day workshop which will bring together all players contributing substantially to the development of a Measurement, Reporting and Verification system for GHG emissions from land-use sectors in PNG,

with the purpose of building collective awareness of on-going activities, highlighting potential for complementary and collaborative efforts, and, where possible, coordinating work plans and activities for more effective progress toward an MRV system for PNG. Expected outcomes of the workshop are an enhanced mutual understanding of all stakeholders of the activities related to MRV that will allow the OCCD to refine a roadmap for the establishment of the MRV system, as well as agreement on the modes of interaction and collaboration among the various stakeholders in the development of the system.

All activities will include comprehensive technical advisory and capacity building assistance to enable PNG stakeholders to carry out the above tasks independently after the NP is completed. Capacity building support will target all stakeholders involved in the operation of the MRV system and be specific to their roles and responsibilities, e.g., FRI on carbon stock measurements and OCCD on a GHG inventory. Wherever possible, capacity building efforts will also target landowners at the community level, e.g. for field measurements of biomass. Such specific training efforts will be complemented with a broader engagement of the involved communities on climate change and awareness to ensure that landowners can make informed decisions and take ownership of their contribution towards and MRV system and other elements of REDD+ readiness. PNG NGOs, with their extensive local presence, relationships, and knowledge, will be critical in building these capacities at the local level. For instance, WWF is already working with local communities in Toricelli Ranges to build awareness and capacities by involving communities in ground plot biodiversity and biomass measurements.

To ensure the long-term sustainability of the operation and advancement of a PNG MRV system, the NP will aim to include PNG's universities and other training institutions as much as possible in order to link their training and research efforts to the specific requirements of the MRV system.

Outcome 3 – Establishment of Reference Emission Levels (REL) and Reference Levels (RL) supported

The UN-REDD NP will support the assessment of methodologies for historical emissions levels from deforestation. Indicative activities under this outcome include:

Output 3.1: Historical drivers of deforestation assessed

- Assessment of past drivers of deforestation, including spatial analysis;
- Test and refinement of MRV methodology (Outcome 2) using available historical emission data;
- Review of methodologies for establishing REL and Reference Levels RL;
- Compilation of data to support the development of REL and RL.

Output 3.2: National circumstances assessed

- Review of the effects of customary land tenure and land reform efforts on REDD+ in PNG, particularly also assessing impacts of the National Land Development Program, land use planning and other land tenure related reform efforts on REDD+;
- Review of the impacts and effects of broader economic and policy development efforts on forestry and land-use related emissions in PNG.

Outcome 4 – Monitoring of abatement concepts supported

The NP will support capacity development for the implementation, monitoring and enforcement of forestry abatement levers outlined in section 2.5 among all relevant stakeholders, i.e. GoPNG, and particularly PNGFA, the private sector, landowners and civil society. Efforts will include training,

implementation and evaluation of abatement lever benefits, and piloting the MRV of abatement levers on the ground. Activities will also include an assessment of how compliance can most effectively be achieved through incentive mechanisms and enforcement, particularly taking into account the limited enforcement capacity in the forestry sector today. The initial focus will include, but not be limited to, the areas of Reduced-Impact-Logging (RIL) practices, secondary forest management, forest conservation (e.g., through community conservation wildlife management areas) and deferred logging or agriculture concessions, and also include afforestation and reforestation. PNGFA has already commenced with preparing pilot activities in these areas, including outside support, e.g., through ITTO. Indicative activities under this outcome are:

Output 4.1: Capacity for monitoring and implementation of priority abatement levers developed

- Develop and deliver comprehensive training in a training of trainers concept for PNGFA and pilot concessions leveraging local vocational and other training capacities;
- Support for piloting abatement levers, including implementation in pilot areas (concessions) and monitoring and verifying results.

Outcome 5 – Stakeholders engaged in PNG's REDD readiness process

The NP will contribute to build awareness and capacity among all domestic stakeholders, particularly at the provincial and community level, to understand and support GoPNG's efforts and progress to establish a REDD+ framework in PNG. The NP's overall objective under this outcome is to strengthen the OCCD's capacity to effectively maintain an ongoing dialogue with communities and landowners on climate change. This will include guidance on effective cooperation between GoPNG and civil society organisations that have existing links to communities. The component is critical for the success of REDD+ readiness activities. NP support complements the comprehensive stakeholder consultation, awareness building and education activities that the OCCD, PNGFA and other stakeholders are already carrying out. Indicative activities under this outcome include:

Output 5.1: Framework for stakeholder engagement processes in place

- Develop and agree on a comprehensive consultation plan and guidelines for stakeholder engagement including the formal agreements for technical, advisory and public consultation levels. This output will be strongly informed by the joint UN-REDD and FCPF Guidelines on Stakeholder Engagement in REDD+ Readiness.
- Facilitate a constructive and reciprocal dialogue between national multi-stakeholder groups, OCCD/GoPNG and development partners, e.g., through the development of outreach material;
- Assist in the review and refinement of the OCCD's consultation strategy through an independent monitoring of the consultative and stakeholder awareness process.

Table 4: Results Framework

JP Outputs	UN Agency	Key partners[27]	Indicative activities for each Output	Amount US$			
Outcome 1. Readiness Management Arrangements in Place				**2011**	**2012-2013**	**Total**	**Support by UN-REDD**
1.1 Management arrangements between GoPNG and stakeholders strengthened	UNDP	OCCD/ DNPM	• Assist the OCCD in liaising with other REDD+ initiatives, in particular the PNG-Australia Forest Carbon Partnership • Assist the OCCD in carrying out PEB and PMC meetings • Support the OCCD in conducting annual NGO and whole-of-government workshops	70,000	150,000	220,000	220,000
1.2 National Programme Implementation strengthened	UNDP	OCCD/ PNGFA	• Provide support through NP Manager • Facilitate knowledge sharing with UN-REDD countries including other regional and international experiences	180,000	40,000	220,000	220,000
Outcome Sub-Total				250,000	190,000	440,000	440,000
Outcome 2. National MRV system developed				**2011**	**2012-2013**	**Total**	**Support by UN-REDD**
2.1 National REDD+ Information System developed	UNDP	PNGFA/ OCCD/DAL/ DLPP	• Field test safeguards • Design the system structure and functions • Develop a national database • Develop a WEB-GIS interface • Training of PNG operators	200,000	300,000	500,000	500,000
	FAO			200,000	150,000	350,000	350,000
	UNEP			100,000	50,000	150,000	150,000
2.2 Satellite Land Monitoring Systems set up	FAO	PNGFA/DAL/ DLPP/DEC/ OCCD/UPNG/ UNITECH	• Establish an operational wall-to-wall system based on satellite remote sensing data • Design a methodological approach to support the implementation of REDD+ at sub-national scale • Provide training in forest land monitoring methodology • Develop a near real time monitoring system	1,600,000	2,000,000	3,600,000	700,000

[27] "Key partners" are just indicative of some relevant actors; the UN-REDD NP and broader REDD-plus readiness process will encompass a much broader range of domestic and international government and non-government stakeholders.

JP Outputs	UN Agency	Key partners[27]	Indicative activities for each Output	Amount US$			
2.3 Multipurpose national forest carbon inventory developed	FAO	FRI	• Develop measurement protocols and sampling design for a national forest carbon survey, building on the existing permanent sampling plot system. System design is driven by UNFCCC reporting requirements. • Assess institutional capacity needs • Establish adequate institutional capacity to undertake regular forest carbon monitoring and reporting consistent with REDD+ information needs • Provide training in forest inventory methodology	2,000,000	2,000,000	4,000,000	1,600,000
2.4 National GHG Inventory for REDD+ established	FAO	OCCD	• Develop institutional capacity • Provide training on IPCC GHG inventory methodology	500,000	800,000	1,300,000	550,000
2.5 Technical advice, capacity building and implementation support provided	FAO	PNGFA/FRI/ DLPP/DEC/ DAL/OCCD	• Provide technical advice and support covering the activities outlined above for the institutions involved in the national MRV system • Provide support through international technical assistant for OCCD Director MRV & National Communication • Develop capacity enabling stakeholders to indepen-dently review the outputs of MRV system	300,000	450,000	750,000	750,000
Outcome Sub-Total				4,900,000	5,750,000	10,650,000	4,600,000
Outcome 3. Establishment of REL/RL supported				**2011**	**2012-2013**	**Total**	**Support by UN-REDD**
3.1 Historical drivers of deforestation assessed	FAO	PNGFA/DAL/ OCCD	• Assess past drivers of deforestation • Test and refine MRV methodology (Outcome 2) using available historical emission data • Review methodologies for establishing REL and national reference emission levels • Compile data to support development of REL	50,000	50,000	100,000	100,000
3.2 National circumstances assessed	UNDP	OCCD/ DLPP	• Review effects of customary land tenure and land reform efforts on REDD+ in PNG, including impacts of the National Land Development Program • Review effects of economic and policy development efforts on REDD+ in PNG	100,000	100,000	200,000	200,000
Outcome Sub-Total				150,000	150,000	300,000	300,000

JP Outputs	UN Agency	Key partners[27]	Indicative activities for each Output	Amount US$			
Outcome 4. Monitoring of abatement concepts supported				**2011**	**2012-2013**	**Total**	**Support by UN-REDD**
4.1 Capacity for monitoring and implementation of priority abatement levers developed	FAO	PNGFA/ OCCD	• Develop and deliver comprehensive training (training of trainers) for PNGFA and pilot concessions	75,000	100,000	175,000	175,000
	UNDP		• Support piloting of abatement levers, including pilot implementation and monitoring and verifying results	75,000	100,000	175,000	175,000
Outcome Sub-Total				150,000	200,000	350,000	350,000
Outcome 5. Stakeholders engaged in PNG's REDD+ readiness process				**2011**	**2012-2013**	**Total**	**Support by UN-REDD**
5.1 Framework for stakeholder engagement processes in place	UNDP	OCCD	• Develop and agree on guidelines for stakeholder engagement including the formal agreements for technical, advisory and public consultation levels • Facilitate a constructive and reciprocal dialogue between national multi-stakeholder groups, OCCD/GoPNG and development partners • Carry out independent monitoring of the consultative and stakeholder awareness process	930,000	1,050,000	1,980,000[28]	280,920
Outcome Sub-Total				930,000	1,050,000	1,980,000	280,920
Total	**Programme Cost**			5,710,000	6,810,000	12,520,000	5,970,920

SUMMARY COST BY AGENCIES		
FAO	Programme Cost	4,225,000
	Indirect Support Cost	295,750
UNDP	Programme Cost	1,595,920
	Indirect Support Cost	111,714
UNEP	Programme Cost	150,000
	Indirect Support Cost	10,500
Total	**Programme Cost**	5,970,920
	Indirect Support Cost	417,964
	Total Cost	6,388,884

[28] Includes full requested OCCD budget for stakeholder engagement processes

5. Management and Coordination Arrangements

5.1. Overall Arrangements for the UN-REDD Programme

Policy Board

The UN-REDD Policy Board provides overall leadership and sets the strategic direction of the UN-REDD Programme. It decides on Programme financial allocations, in line with the budget parameters set out in the UN-REDD Framework Document, and develops monitoring mechanisms, with a view to ensuring Fund-wide success. The UN-REDD Policy Body will ensure coordination with REDD+ actors at a global scale, such as the World Bank's FCPF participants' committee. The Terms of Reference and Rules of Procedure for the UN-REDD Policy Board are available on the UN-REDD Programme website www.un-redd.net

UN-REDD Secretariat

The UN-REDD Secretariat serves the Policy Board, using the capacities of the participating UN organizations, research institutions and recognized experts. It ensures policies and strategies decided by the Policy Board are implemented and adhered to. The Secretariat will manage the National Programme review process. It will also manage the UN-REDD's overall monitoring and evaluation function which includes *inter alia* monitoring allocations to and delivery by the national programmes, and tracking Programme-wide progress and ensuring that monitoring mechanisms are applied.

The Secretariat's main roles can be summarised as follows:

- Policy Board support
- Partner and external relations
- Quality assurance and oversight of National Programmes
- Quality assurance and oversight of the International Support Functions described in the Global Joint Programme (hereafter referred to as the "Global Joint Programme")
- Monitoring and knowledge management

Participating UN Organizations' Coordination Group

The Participating UN Organizations' Coordination Group consists of representatives of the three UN agencies: FAO, UNDP, and UNEP. The Coordination Group will have the main function in ensuring active, participatory and well-coordinated engagement by the agencies to implement the goals and objectives of the overall UN-REDD Programme, as well as to provide oversight of the Secretariat consistent with the strategic directions and decisions provided by the Policy Board.

Administrative Agent

The UNDP Multi-Donor Trust Fund (MDTF) Office is the Administrative Agent of the UN-REDD Fund. The MDTF Office manages the distribution of resources and serves as the administrative interface with donors. UNDP's accountability as the Administrative Agent is set out in the policy "UNDP's Accountability when acting as Administrative Agent (AA) in MDTFs and/or UN Joint Programmes using the pass-through fund management modality".

The MDTF Office as AA will is responsible for:

- Receipt, administration and management of contributions from donors;

- Disbursement of funds to the Participating UN Organization, in accordance with the instructions of the UN-REDD Policy Board;
- Provide support to FAO, UNDP and UNEP in their reporting functions;
- Compilation of consolidated narrative and financial reports to the Policy Board through the UN-REDD Secretariat, national steering committees and to donors.

The Administrative Agent may undertake additional functions at the request of the Participating UN Organizations. The Administrative Agent will charge a one-time fee of 1 percent for fund administration and fiduciary responsibilities which will be provided in advance on the basis of Programme Documents budgets approved by the Policy Board.

5.2. Management Arrangements at the National Level

This UN-REDD NP and associated Annual Work Plan (AWP) are an integral part of the overall UN Country Programme (UNCP) Action Plan. The UNCP Action Plan provides the overall legal framework and the relevant management arrangements, which will apply to this AWP. The "Implementing Partner" (referred hereunder as the "Designated Institution") of this Programme will be the OCCD. The OCCD Executive Director will direct the programme and carry overall accountability for the programme to the GoPNG and to the UN agencies as National Programme Director (NPD). The overall programme and each specific activity will be implemented under the leadership of the GoPNG, represented by the NPD. It is envisaged that the NPD is then represented by the National Programme Manager in the UN's Environment and Sustainable Livelihoods Task Team.

Fund management will use the pass-through modality.[29] The funds from UN-REDD will be passed through from the Administrative Agent, i.e. the MDTF, to the Participating UN Organisations in accordance with the MOU between UN-REDD and the Multi-donor Trust Fund Office.[30]

The Programme will be managed in accordance with the 2003 UNDG Guidance Note on Joint Programming. It will be executed by several "National Implementing Agencies", including the OCCD, the PNGFA, Provincial and District agencies, through the participating UN organizations UNEP, FAO, and UNDP. Each of those Implementing Agencies is accountable to the participating UN organization relating to the funds released for the delivery of a specific set of outputs and for management of inputs. Specialized service delivery costs for programme and project implementation may be charged directly to the National Programme, in accordance with the respective Participating UN Organizations' policies, but such costs will amount to no more than 6 percent of the Participating UN Agency's budget allocation..will be through joint GoPNG Development Partners' Climate Change Forum.

PNG's National Programme will immediately engage the following in-country positions:

- Program Manager;
- 'Technical assistant' to the OCCD Director 'MRV & National Communication'.

The team will be based in the OCCD. The Program Manager, and 'Technical assistant' to the OCCD Director 'MRV & National Communication' will be selected through a joint recruitment process by the OCCD and UN Agencies. They will be contracted by UNDP through the office of the Resident Coordinator. Specialized service delivery costs for programme implementation may be recovered directly, in accordance with the respective Participating UN Organizations' policies. In this regard, UNDP will provide technical support and quality assurance for its component of the NP through its Energy and Environment Group, particularly the Regional Technical Advisor, REDD (based in

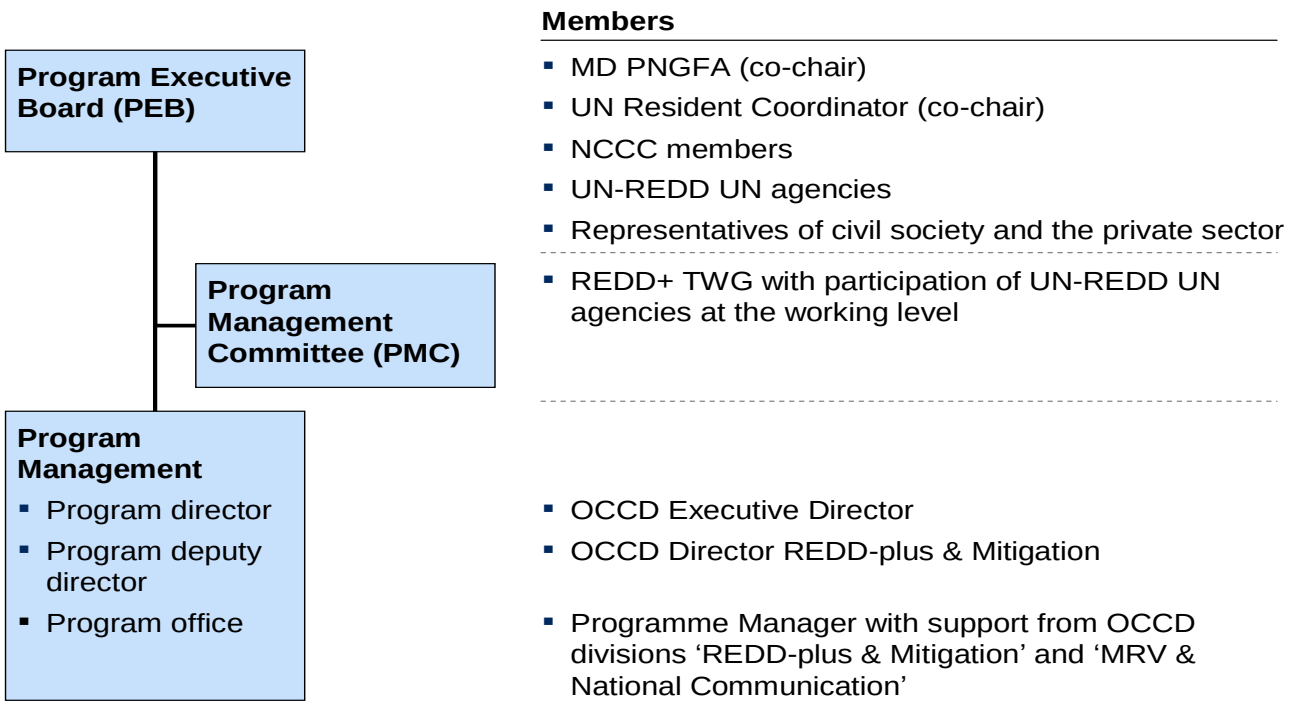
[29] www.undg.org/archive_docs/3642-Finalized_Guidance_Note_on_Joint_Programming__complete_.doc

[30] http://www.undp.org/mdtf/UN-REDD/docs/UN-REDD-MOU.pdf

Bangkok) and the Senior Technical Advisor, REDD (based in New York). These positions will also ensure the linkage of the NP to the UN-REDD Technical Secretariat.

Where deemed appropriate, OCCD as the Implementing Partner can request the UN to provide support services for the AWP, for which relevant details are described in the 'Standard Letter of Agreement for Provision of Support Services'. The cost of these services will be charged to the AWP budget according to the Universal Price List for Support Services.

FIGURE 16 – UN-REDD PNG NP Management Arrangements



Programme Executive Board (PEB)

A Programme Executive Board will be established and comprised of representatives from UN agencies, from national implementing partners (OCCD, PNGFA), from other NCCC members including the NCCC Chair, from civil society organisations, and from the private sector (e.g. FIA). The PEB will initially meet quarterly, for at least the first three quarters of project implementation, and thereafter at intervals required to ensure effective project implementation. The PEB will be responsible for the effective coordination of the programme, the approval of all detailed work plans, budgets, and overall monitoring and evaluation of progress made. PEB decisions will be reached by consensus. Specific responsibilities of the PEB include:

- Providing leadership, guidance and approval on the strategic and policy direction for NP implementation within the approved UN-REDD Operational Guidelines
- Ensuring NP implementation is aligned with national priorities to promote integration and identify synergies between different REDD+ related initiatives
- Providing overall guidance and approval of AWPs including budgetary allocations for activity implementation as well as making necessary adjustments to attain the anticipated outcomes

- Reviewing NP implementation progress, identifying issues and suggesting corrective actions where appropriate
- Reviewing and approving quarterly and annual progress reports, including financial reports
- Facilitating coordination and information sharing among all stakeholders
- Reviewing and approving any NP related Terms of Reference and country submissions to the UN-REDD Secretariat and Policy Board

National REDD+ Technical Working Group

The existing REDD+ Technical Working Group, chaired by the OCCD and comprising members from relevant GoPNG departments, civil society, private sector and development partners will act as PNG's UN-REDD NP technical committee. The REDD+ TWG will meet once a month to share progress made and find solutions for common issues. The PEB and PMU will strongly rely on REDD+ TWG whose main responsibilities are:

- Providing overall REDD technical knowledge and guidance for the implementation of the NP based on global, regional and national best practices
- Promoting exchange of knowledge and information sharing among all members
- Providing substantive inputs for the design, coordination and implementation of AWPs and Budgets
- Reviewing NP documents for technical feasibility and propose recommendations for PEB endorsement
- Encouraging facilitation and coordination of NP activities with other REDD+ related initiatives

Programme Management Unit (PMU)

The PMU under the leadership of the Program Manager will be guided and supervised by the National Program Director. The PMU will be responsible for the day-to-day management of the programme, including the preparation of annual work plans, quarterly progress and financial reports as well as to liaise and coordinate with the partners responsible for the implementation of outputs, such as PNGFA and its division FRI, DEC, DLPP and others. Work will initially be led by a Programme Manager to be funded out of the UN-REDD NP. The Programme Manager's work will be guided by the CCDS. He/she will be selected in a joint recruitment process between the OCCD and UN agencies. The Programme Manager will report to the Deputy National Programme Director and work closely with OCCD's divisions 'REDD+ and Mitigation' and 'MRV and National Communication' which act as programme management unit (PMU).

National Programme Director (NPD)

The Executive Director of the OCCD will assume the role of National Programme Director (NPD). As well as being responsible to the GoPNG and the UN Resident Coordinator for overall delivery of the programme, as well as serving as PEB Secretariat.

Deputy National Programme Director (DNPD)

The OCCD Director REDD+ and Mitigation will assume the role of Deputy National Programme Director (DNPD). The DNPD will be responsible for ensuring that the responsible UN agencies and implementing partners organise and deliver results according to the results framework (Table 4). The DNPD will also be responsible for maintaining regular contact with other development partners to ensure that the PNG UN-REDD programme responds to new initiatives developed by those partners.

UN Resident Coordinator

The Resident Coordinator shall keep Country Team members fully-informed on UN-REDD activities. Involvement of the Government in the deliberations concerning the programme activities in the country is also crucial. The UN-REDD Programme also looks to Resident Coordinator to reach out to NGOs, CSOs, national governments and non-resident UN agencies, where appropriate.

The UN Resident Coordinator will provide ongoing oversight to the NP at the national level, ensuring the participating UN organizations are meeting their obligations. The Resident Coordinator is entrusted with supporting the overall programme design under the government's leadership, ongoing programmatic oversight of the UN-REDD activities and UN coordination with the OCCD. The Resident Coordinator also facilitates ongoing monitoring and evaluation of UN-REDD activities in conformity with UN standards. On receipt of consolidated country level reports, the Resident Coordinator will provide an overall assessment of the programme's progress and results. He/she will also facilitate ongoing monitoring and evaluation of Fund-supported activities in conformity with UN standards and any guidance provided by the UN-REDD Secretariat or Policy Board.

5.3. Cash Transfer Arrangements and work planning and budgeting

In the Case of all three UN Agencies, cash transfers will be according to the UN Harmonized Approach to Cash Transfers (HACT). The specific modality of cash transfers will be determined on the basis of a joint micro-assessment to be conducted by ExComm agencies.

The PMU will be responsible for preparing a quarterly work plan (QWP) using a unified work plan format and covering activities and inputs under all three Participating UN Agencies, and (after the first quarter of implementation) a unified report on activities and expenditures during the previous quarter, disaggregated by participating UN Agency. The QWP will be accompanied by a quarterly budget table, disaggregated by responsible Participating UN Agency, as specified in chapter 9, above, and for identifying specific procurement and recruitment activities to be undertaken by the National Implementing Partners and Participating UN Agencies. The QWP and budget will be reviewed and agreed among the three UN Agencies and the NPD. Taking into account the financial report of the preceding quarter, and any cost savings or overruns reported therein, funds for those activities will be allocated by each responsible agency. The legal basis for fund transfer will be in accordance with agency financial rules and regulations.

6. Fund Management Arrangements

The UN-REDD Collaborative Programme utilizes the 'pass-through' modality for fund management. Participating UN organizations, in this case FAO, UNDP and UNEP, assume full programmatic and financial accountability for the funds received from the Administrative Agent.

Each Participating UN Organization shall decide on the execution process with its partners and counterparts following the organization's own regulation and rules. National governments, Regional Development Banks and NGOs can receive funding through a Participating UN Organization and act as executing agencies. Participating UN Organizations shall be entitled to deduct their indirect costs on contributions received according to their own regulations and rules, taking into account the size and complexity of the particular programme. Any indirect costs will be reflected in the National Programme submitted to the UN-REDD Secretariat. Indirect costs will not exceed 7 percent of the project budget. These costs cover general oversight, management, and quality control, in accordance with its financial regulations and rules. Parties to the NP commit to negotiate appropriate fees charged and services provided. Specialized service delivery costs for programme and project implementation may be recovered directly, in accordance with the respective Participating UN Organizations' policies.

Each Participating UN Organization will use the funds disbursed to it by the Administrative Agent from the UN-REDD Programme MDTF to carry out the activities for which it is responsible as set out in this document as well as for its indirect costs. The Participating UN Organizations will commence and continue to conduct operations for the UN-REDD Programme as set out in the UN-REDD MOU or as instructed by the UN-REDD Policy Board. The Participating UN Organizations will not make any commitments above the approved budgets, as amended from time to time by the Policy Board. If there is a need to exceed the budgeted amounts, the Participating UN Organization concerned will submit a supplementary budget request to the UN-REDD Policy Board, through the UN-REDD Secretariat.

The Administrative Agent will ensure consistency of the approved National Programme with the applicable provisions of the Standard Administrative Arrangements (SAA) entered between donors and the Administrative Agent, and the MOU between the Participating UN Organizations and the Administrative Agent.

Funds will be released in accordance with the UN-REDD Programme Rules of Procedure. These procedures require the UN-REDD Secretariat to submit the following to the Administrative Agent:

- Copy of the signed NP document with the approved budget
- Submission Form, signed by the Chair of the Policy Board.

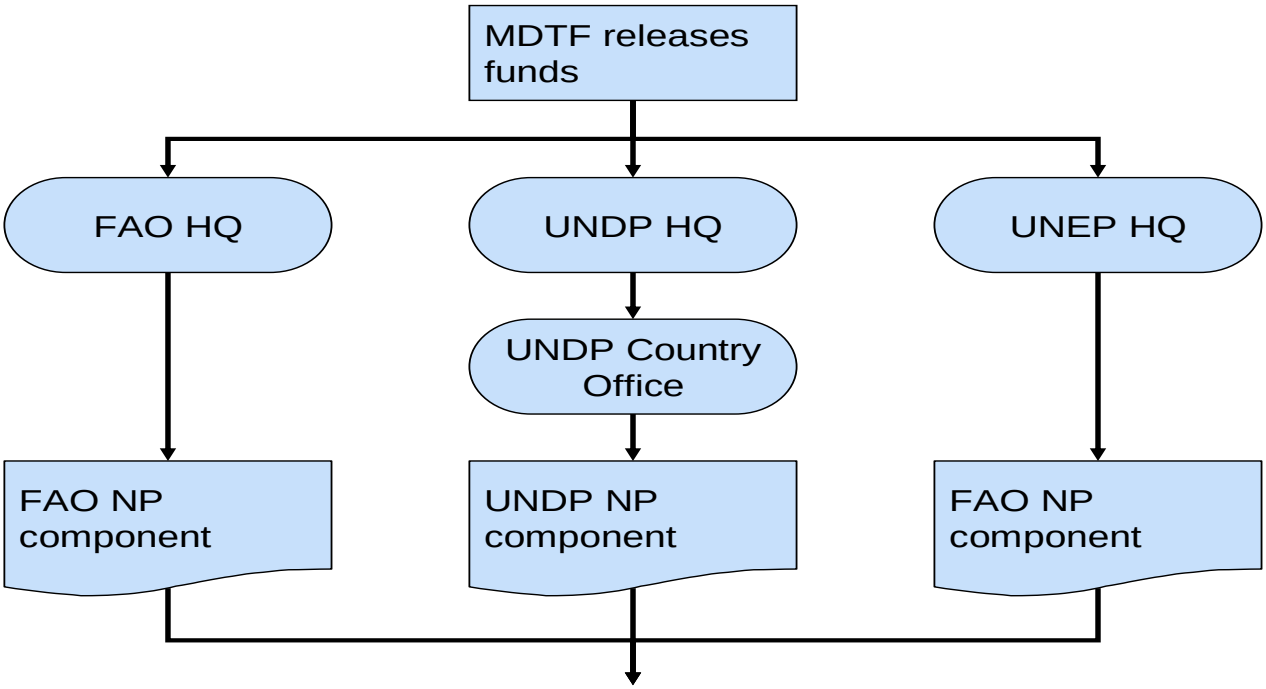
Upon receipt of the necessary documentation, the Administrative Agent shall release funds to the Participating UN Organizations as set out in Section II of the Memorandum of Understanding for the Multi-Donor Trust Fund (available at www.undp.org/mdtf/UN-REDD/overview.shtml). The Administrative Agent shall notify the Participating UN Organizations and the UN Resident Coordinator when the funds have been transferred. Each Participating UN Organization shall establish a separate ledger account for the receipt and administration of the funds disbursed to it by the Administrative Agent.

The OCCD prepares substantive progress reports on a quarterly basis and submits these for review and approval to the PEB. Within the context of the Harmonized Approach to Cash Transfers (HACT), the OCCD will manage the implementation of this AWP and, in accordance with the UNCP Action Plan, ensure appropriate agreements are prepared and signed with the Responsible (third) Party, in cases where the implementation of certain activities is being outsourced. The OCCD will use the form called Funds Authorization and Credit Expenditures (FACE) to financially report on the PEB, also on a quarterly basis. Depending on the cash transfer modality, this quarterly financial report includes the request for funds for the next quarter. Also, the procurement of the outsourced

activities, the achievement of the results envisaged by them and the appropriate use of resources, remain the responsibility of the OCCD.

As an initial step to implement HACT, the OCCD is subject to a Micro Assessment conducted by a selected audit firm. By signing this NP, OCCD reaffirms its commitment to the Micro Assessment and the subsequent recommendations, including decisions pertaining to the appropriate cash transfer modality and assurance activities.

FIGURE 17 – Flow of Funds for the National Programme



The specific cash transfer modalities for the Participating UN Organizations are:

- **FAO**: FAO funds to be distributed according to FAO financial rules and regulations.
- **UNDP**: Funds will be transferred from UNDP/BDP/EEG to the UNDP Country Office. Fund utilization will be according to the UN Harmonized Approach to Cash Transfers. The payment will take the form of "direct cash transfer", "direct payment" or "reimbursement". Funds will be managed in accordance with UNDP financial rules and regulations
- **UNEP**: The appropriate UNEP office, or UNDP Country Office shall manage its programme funds in accordance with UNEP's financial rules and regulations. Accountable advances will be transferred to the selected partners in this Joint Programme, following the designated modalities outlined in the agreements and/or subcontracts with UNEP.

7. Monitoring, Evaluation and Reporting

The National Programme Monitoring Framework will be developed during the finalisation and approval/signature of the NP document. It will be cleared by the UN-REDD Secretariat. Table 5 below provides a preliminary framework.

Table 5: National Programme Monitoring Framework (NPMF)

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
From Results Framework (Table 1)	• *From Results Framework (Table 1)* • *Baselines are a measure of the indicator at the start of the joint programme*	• *From identified data and information sources*	• *How is it to be obtained?*	• *Specific responsibilities*	• *Summary of assumptions and risks for each result*
Outcome 1. Readiness Management Arrangements in Place					
1.1 Management arrangements between GoPNG and stakeholders strengthened	• Baseline: GoPNG liaises with donors through FCC; REDD+ NGO workshop and whole-of-government workshop conducted in 2010 • By 12/2011, all donor support on climate change is effectively coordinated and aligned along GoPNG priorities • By 12/2013, at least 1 REDD+ NGO workshop and 1 whole-of-government workshop have been held annually to progress REDD+ readiness	• Technical Working Group minutes • FCC meeting minutes • Workshop minutes/ reports	• Collection of minutes and reports	• NP manager	• Technical Working Groups and FCC are key for a for convening GoPNG and stakeholders
1.2 National Programme Implementation strengthened	• Ongoing during NP implementation: Project documents (work plans, budgets, reports, TORs etc.) are produced on time	• PEB minutes • Programme/Project Progress Reports	• Collection of minutes and reports	• PEB	• NP effectively contributes to REDD+ readiness in PNG

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
Outcome 2. National MRV system developed					
2.1 National REDD+ Information System developed	• Baseline: No centralized source for information on REDD+ or safeguards • By 12/2011, information on REDD+ and safeguards is available to all stakeholders through a web-based interface and an annual report • By 06/2012, safeguards have been tested in the field	• REDD+ Information System website • Annual REDD+ reports • Reports and minutes from field visits	• Review of website • Collection of reports	• NP manager	• Limited capacity of GoPNG to coordinate and operate a full REDD+ information system. • No international best practice available
2.2 Satellite Land Monitoring Systems set up	• Baseline: Fragmented use of GIS systems in GoPNG departments, often relying on outdated data • By 12/2011, methodo-logical approach, technical system and institutional responsibilities specified • By 12/2013, SLMS provides annual GIS data sets used for MRV and across GoPNG	• Reports and guideline documents • SFLMS data	• Collection of reports and documents • Assessment of GIS data	• NP manager	• Limited technical and operational capacity of PNGFA and OCCD coordinate and operate a full MRV system.
2.3 Multipurpose national forest carbon inventory developed	• Baseline: FIMS, FIPS and Persyst in use by PNGFA with limited data on carbon • By 12/2011, measurement protocols and sampling design for forest carbon survey defined • By 12/2013, GoPNG has capacity to regularly undertake forest carbon monitoring and reporting	• Reports, protocols and guidelines • Inventory data	• Collection of reports and documents • Independent data review	• NP manager	• Limited technical and operational capacity of PNGFA and OCCD coordinate and operate a full MRV system.

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
2.4 National GHG Inventory for REDD+ established	• Baseline: Preparation of SNC underway with support from UNDP • By 12/2012, first REDD+ related GHG inventory completed based on PNG's MRV system • By 12/2013, PNG has institutional capacity to regularly report GHG emissions from REDD+-related activities	• GHG inventory reports and data • Record of institutional arrangements	•	• NP manager	• Limited technical and operational capacity of PNGFA and OCCD coordinate and operate a full MRV system.
2.5 Technical advice, capacity building and implementation support provided	• Baseline: limited and fragmented capacity for elements of a MRV system in GoPNG and non-government stakeholders • By 12/2011, capacity gap assessment and capacity building plan for MRV elements in place • By 12/2013, GoPNG and stakeholders have capacity to independently operate PNG's MRV system	• Training reports • Workshop agenda and minutes • Capacity increased	• Collection of reports • Capacity assessments	• NP manager	• Limited technical and operational capacity of PNGFA and OCCD coordinate and operate a full MRV system.
Outcome 3. Establishment of REL/RL supported					
3.1 Historical drivers of deforestation assessed	• Baseline: preliminary assessment of drivers of deforestation and GHG emissions • By 12/2012, data to develop REL/RL compiled and clear guidance on methodology for REL/RL developed	• Guidance documents • Data sets	• Collection and review of data and reports	• NP manager	• REL/RL methodologies not yet agreed under UNFCCC

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
3.2 National circumstances assessed	• Baseline: existing land tenure and macro-/socio-economic research & studies with limited assessment of impacts on REDD+ and emissions • By 12/2012, national circumstances and their impact on GHG emissions and REDD+ assessed	• Assessment reports	• Collection and review of reports	• NP manager	• REL/RL methodologies not yet agreed under UNFCCC
Outcome 4. Monitoring of abatement concepts supported					
4.1 Capacity for monitoring and implementation of priority abatement levers developed	• Baseline: priority abatement levers identified; only limited experience in implementation • By 12/2013, monitoring and implementation concepts for key abatement levers have been refined	• Reports, briefings • CCDS	• Collection and review of reports	• NP manager	• CCDS outlines priority abatement actions for PNG
Outcome 5. Stakeholders engaged in PNG's REDD+ readiness process					
5.1 Framework for stakeholder engagement processes in place	• Baseline: consultation work plan for 2011; 4 provinces consulted in 2010 • By 12/2011, consultation plan and stakeholder engagement guidelines in place • By 12/2011, 8 additional provinces consulted and consultation process independently reviewed	• Comprehensive consultation plan and stakeholder engagement documents • Stakeholder Consultation Workshop Reports • Consultation review/monitoring report	• Collection of documents and reports	• NP manager	• Limited understanding of REDD+ and how it could work in the PNG context as well as the complexity surrounding landowner issue may slow progress and create tensions amongst differing beneficiaries.

7.1. Monitoring of risk

Each regular meeting of the PMC will review the Risk Log (see Table 6). This will be supported by a comprehensive risk monitoring plan, the details of which will be presented at the Inception Workshop. In the case of any risks for which the PMC concludes that the risk status, or the probability or impact scores need to be amended, the PMC will recommend whether the existing Counter Measures/Management Response remain adequate or need to be amended also. The revised Risk Log will be sent to all participating UN agencies as soon as possible after the PMC meeting.

Table 6: RISK LOG: UN-REDD Programme for PNG

RISK TYPE	RISKS (threats & opportunities)	Risk impact score[31]	Risk probability score[32]	Proposed Action
Social	1. Tribal community systems and land-owner rights are highly complex & unpredictable and may be counterproductive to the development of ground truthing elements for the MRV system, to transparent and equitable ways of benefit/revenue sharing, as well as to effective community-based forest conservation programs.	4	5	- Establish clear framework and comprehensive consultation plan for effective community outreach and awareness building - Ensure sufficient resources for landowner information and consultation (and compensation, where applicable) in all activities of the NP at the local level (e.g., ground truthing/biomass measurements) - Establish simple and transparent dispute resolution mechanism for NP implementation, building on existing recourse mechanisms in PNG (to be replaced by a comprehensive REDD+ dispute resolution mechanism, once developed as part of PNG's overall REDD+ readiness efforts)
	2. Target communities' extreme poverty, low education levels, and being unacquainted with external aid programs may lead to large REDD+ start-up problems and delays, as well as introduce vulnerability to non-equitable practices.	5	4	Same as above: put adequate GoPNG and NP resources into community organization, outreach and development.

[31] 1 very low; 2 low; 3 medium; 4 high; 5 very high

RISK TYPE	RISKS (threats & opportunities)	Risk impact score	Risk probability score	Proposed Action
	3. Unknown procedures, methodologies and decision mechanism to establish and communicate REDD+ project carbon values may weaken fair distribution of payments and other benefits (sub-national and project REDD+ accounting).	4	2	As part of the multipurpose national forest carbon inventory, develop standardized carbon estimate methodologies and procedures that can be utilised in REDD+ projects
Financial	1. High overhead costs for national REDD+ management and MRV may excessively reduce cash benefits to carbon sellers landowners.	3	4	Ensure PNG MRV system is developed cost-efficiently with a view towards balancing ongoing operating cost against expected REDD+ payments
Operational	1. Weak information supply and low level of REDD+ awareness may lead to wrong expectations, loss of stakeholders' trust and wrong REDD approaches (PNG REDD+ programs runs ahead of basic awareness requirement levels)	4	4	- Sustain and expand national REDD+ consultation and communications campaign, involving education, training and social marketing approaches (2011-2013), based on comprehensive consultation plan - Work closely with NGOs and CBOs who work with landowners to ensure that (i) landowners are properly informed and that (ii) landowners are receiving consistent messages
	2. Lack of PNG forest scientific capacity to provide applied research to REDD+, particularly MRV	3	4	- Strengthen FRI through partnerships on REDD+ research; - Strengthen UPNG and UNITECH and other research capacity to support operation and continuous enhancement of the MRV system
	3. Private sector moves quickly into voluntary market arrangements, VCS undermines development of national baseline approach	3	4	Continue engagement with private sector on planned investments/engagement, in line with national consultation and stakeholder engagement plan
	4. Plant taxonomic skills FRI to be utilized for REDD+ forest monitoring program (opportunity)	3	3	Fully involve FRI staff in proposed National Multi-purpose Forest Inventory program

RISK TYPE	RISKS (threats & opportunities)	Risk impact score	Risk probability score	Proposed Action
Organizational	1. Weak local government governance systems & capacity, and little decentralized program experience will prevent proper operation of MRV system	4	5	- Provide adequate capacity building and training at sub-national level to ensure sufficient capacity for ground truthing
	2. The OCCD is not adequately receptive to broad-based support arrangements and working with a range of sector agencies and non-governmental organizations, which may prevent enhanced forest governance and community development systems.	4	2	- Link all aspects of support with the operations of the OCCD, clearly identify how broad-based support assists OCCD - Integrate NP into work of Technical Working Groups managed by the OCCD.
	3. Donor assistance is mobilised too slowly to meaningfully contribute to UNFCCC negotiations, and momentum on National REDD+ Program planning dialogue is lost	3	4	- Ensure NP fund management arrangements allow for timely program implementation - Organise continuous development partner engagement and coordination through donor in-country offices, supported by joint donor missions
Political	1. Need for policy harmonization as well as political will to review e.g. 'high impact projects', expiring Forest Management Agreement areas and to cancel ongoing logging concessions/agricultural leases may reduce prospect for REDD+ projects.	5	4	- National consultation plan to include component on engagement of politicians and decision makers. - Whole-of-government approach to be strengthened through inclusive management arrangements for NP
	2. Need to acknowledge the authority of PNGFA on forest matters in any national REDD+ program	4	3	OCCD to establish partnership with PNGFA
	3. Political change means OCCD is disbanded	4	3	- Ensure support broad based and shared among a range of relevant institutions (e.g. DEC, PNGFA, NGOs where appropriate, UPNG), including strong link of programme to multi-stakeholder working groups - Leverage and strengthen existing capacities in institutions that have existing infrastructure/ technologies (e.g., FRI, PNGFA, DEC)

RISK TYPE	RISKS (threats & opportunities)	Risk impact score	Risk probability score	Proposed Action
	4. OCCD continues to exist but institutional architecture is further amended in near term	2	3	- Ensure support broad based and shared among a range of relevant institutions (e.g. DEC, PNGFA, NGOs where appropriate, UPNG), including strong link of programme to multi-stakeholder working groups - Leverage and strengthen existing capacities in institutions that have existing infrastructure/ technologies (e.g., FRI, PNGFA, DEC)
	5. Other government departments resist cooperation with OCCD	5	3	- Encourage whole-of-government approach through inclusive management arrangements for NP and involvement of technical working groups
Regulatory	1. PNG policy direction, in particular on carbon accounting, does not meet international standards	4	2	- Focus on areas of agreement, engage where possible on carbon accounting - Build trust through ongoing engagement and preparedness to support existing efforts
	2. Unclear carbon accounting rules encourage overestimates at the project level to generate excess REDD+ credits	3	3	- Develop clear and transparent carbon accounting rules for sub-national (demonstration) activities
Strategic	1. PNG REDD+ program has yet to specify steps towards maximizing biodiversity conservation benefits and as such may miss its Environmentally Sustainable Economic Growth target: "reduce biodiversity loss, by 2010, a significant reduction in the rate of loss".	3	3	- Incorporate biodiversity data and targets in planned development of REDD+ information system and safeguards
	2. Development of REL/RL is captured to artificially inflate the baseline in order to create excess credits	4	2	- Ensure transparent assessment of historical drivers of deforestation and national circumstances that can be independently reviewed - Rely on emerging SBSTA guidance on establishing baselines, with third party verification of nominated baseline, once established

RISK TYPE	RISKS (threats & opportunities)	Risk impact score	Risk probability score	Proposed Action
8	3. Climate change sector is so highly politicized that robust policy dialogue is meaningless	3	2	Continued engagement with non-Government sector, and broadly at the officials level across government through NP management arrangements and engagement of technical working groups and NCCC
	4. Donor assistance is not coordinated	3	1	- Continual donor engagement, support for OCCD to convene a donor partner's forum - Sharing of key documentation among donors - Regular dialogue both in-country and in international fora on progress on donor support programs in PNG

Annual/Regular reviews

Activities carried out by the Participating UN Organization shall be subject to internal and external audit as articulated in their applicable Financial Regulations and Rules. In addition, the UN-REDD Secretariat will consult with the Participating UN Organizations on any additional specific audits or reviews that may be required, subject to the respective Financial Regulations and Rules of the Participating UN Organizations. Participating UN Organizations will provide a summary of their internal audit key findings and recommendations for consolidation by the MDTF Office and submission to the Policy Board and National REDD+ Committee as applicable.

GoPNG, particularly the Executing Agency, or Lead Implementing Partner, and the Participating UN Organizations, shall jointly conduct scheduled/annual planning and review meetings for all activities covered in the results framework, monitoring and evaluation plan and work plans covered by this National Programme. This will include an assessment of the risks and assumptions to determine whether they are still holding.

Evaluation

The UN-REDD Secretariat will establish an Evaluation Plan which ensures that all programmes supported by the UN-REDD Programme will undertake a final evaluation, which will assess the relevance and effectiveness of the intervention, and measure the development impact of the results achieved, on the basis of the initial analysis and indicators described at the time of programme formulation. Furthermore, the UN-REDD Secretariat from time to time shall lead reviews for programmes as necessary.

Reporting

At the national level, the Participating UN Organizations are required to provide narrative reports on results achieved, lessons learned and the contributions made to the National Programme. Quarterly progress report (programme and financial results) will be prepared by the PMU and submitted to UN Coordination Office after quality control by the HOA. The information shall be consolidated by the Programme Manager into a narrative report every 6 months. The UN-REDD Secretariat shall provide the Policy Board updates on the implementation progress of the National Programme every 6 months, based on information received from the Programme Manager. The UN Resident Coordinator will assist in ensuring the Participating UN Organizations at the country level provide the necessary information. The UN-REDD Coordination Group shall also follow-up with the relevant officers and representatives of the Participating UN Organizations.

The Administrative Agent will provide regular updates on the financial status of the MDTF to the Policy Board, for review and action as appropriate. Participating UN Organizations in receipt of UN-REDD resources will be required to provide the Administrative Agent with the following statements and reports:

- Narrative progress reports for each twelve-month period ending 31 December, to be provided no later than three months after the end of the applicable reporting period;
- Annual financial reports as of 31 December each year with respect to the funds disbursed to it from the National Programme Account, to be provided no later than four months after the end of the applicable reporting period;

- A final narrative report and financial report, after the completion of all National Programme activities financed from the UN-REDD MDTF, to be provided no later than 30 April of the year following the financial closing of National Programme activities;
- A final certified financial statement, to be provided no later than 30 June of the year following the financial closing of Project activities.

The Administrative Agent shall prepare consolidated narrative progress and financial reports consisting of the reports referred to above submitted by each Participating UN Organization, and shall provide those consolidated reports to the respective Resident Coordinators and subsequently to the UN-REDD Policy Board through the UN-REDD Secretariat.

Subsequently, in accordance with the MOU and the SAA, the Administrative Agent will submit consolidated narrative and financial reports to all UN-REDD Programme donors. Agreed standard UNDG financial and progress reporting formats will be utilised. The Administrative Agent will also submit to donors a certified annual financial statement (Source and Use of Funds).

Information given to the press, to the beneficiaries of the UN-REDD Programme, all related publicity material, official notices, reports and publications, shall acknowledge the role of the UN-REDD donors, the UN Agencies, and any other relevant parties.

Whenever possible and to the extent that it does not jeopardize the privileges and immunities of UN Agencies, and the safety and security of their staff, UN Agencies will promote donor visibility on information, project materials and at project sites, in accordance with their respective regulations, rules, policies and procedures.

8. Legal Context or Basis of Relationship

The Participating UN Organizations (FAO, UNDP and UNEP) have signed a Memorandum of Understanding (MOU) to implement the UN-REDD Collaborative Programme, which came into effect on 20th June 2008 and ends 20th June 2012.

This NPD is consistent with the cooperation/assistance agreements signed by the lead UN agencies involved in this programme with GoPNG. In addition, implementation will be carried out with adherence to the UN-REDD Programme's "Rules of Procedure and Operational Guidance." For the UNDP, this Document is pursuant to the Country Programme Action Plan and the Standard Basic Assistance Agreement (SBAA) it signed with the Government of the PNG on 7 April 1981. All provisions in the SBAA therefore apply to this document. Consistent with Article III of the SBAA, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; and
- assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

The **UNDP** reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

On the part of the **FAO**, the FAO Office (UN-REDD Programme) in Rome shall represent the Organization in PNG, and shall be responsible within the limits of the authority delegated to him/her, for all aspects of the Organization's activities in the country. In the effective performance of his/her functions, the FAO representative shall have access to appropriate policy and planning levels of GoPNG in the agriculture and forestry sectors of the economy, as well as to National Planning and the OCCD. He/she shall maintain close liaison with the Government's coordinating agency for external assistance and thereby serve to keep all the appropriate Government agencies fully informed on all aspects of the policies and procedures of FAO's programme in PNG.

For **UNEP**, in line with its position as a non-resident agency with a global mandate for technical cooperation and capacity building, the signed NPD shall be the basis of UNEP's relation with the Government of PNG within the context of this programme. UNEP will work in close coordination with the programme management team.

The Participating UN Organizations agree to undertake all reasonable efforts to ensure that none of the funds received pursuant to UN-REDD are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by Participating UN Organizations do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this programme document.

9. Work plans and budgets

An annual work plan and budget will be produced each year for each Participating UN Organization, subsequent to the decisions of the annual/regular reviews. Each work plan will be approved by the UN-REDD Secretariat and signed by the implementing partners. A work plan for year 1 of the NP will be developed during the approval/signature and inception phase of the NP. For outcome 2 'National MRV system developed', it is envisaged that this will be jointly elaborated by OCCD, PNGFA, FRI, FAO, JICA, AusAID and other key partners as necessary.

Annexes

Annex 1 –
Stakeholder validation meeting minutes

Annex 2 –

NCCC Business Paper
'PNG UN-REDD National Programme'

Annex 3 –

Secondment position of a 'technical assistant' to the OCCD Director MRV and National Communication – Description

Annex 4 –

National Programme Manager – Draft Terms of Reference

Annex 5 –

Request for Expression of Interest for the Provision of MRV Services –

Terms of Reference

Annex 6 –
REDD+ project guidelines and safeguard criteria –
Draft document

Annex 7 –
OCCD's National Consultation Process –
Overview of 2010-11 Activities

Annex 8 –

Independent adviser to Papua New Guinea's (PNG) provincial consultation process in relation to the Climate-Compatible Development Strategy (CCDS) –

Draft Terms of Reference

Annex 9 –

TOR for OCCD's REDD+ Technical Working Group