

The Forest Carbon Partnership Facility (FCPF) Readiness Plan Idea Note (R-PIN) Template

July 29, 2008

Guidelines:

1. The purpose of this document is to: a) request an overview of your country's interest in the FCPF program, and b) provide an overview of land use patterns, causes of deforestation, stakeholder consultation process, and potential institutional arrangements in addressing REDD (Reducing Emissions from Deforestation and Forest degradation). This R-PIN will be used as a basis for the selection of countries into the FCPF by the Participants Committee. Information about the FCPF is available at: www.carbonfinance.org/fcpf
2. Please keep the length of your response under 20 pages. You may consider using the optional Annex 1 Questionnaire (at the end of this template) to help organize some answers or provide other information.
3. You may also attach at most 15 additional pages of technical material (e.g., maps, data tables, etc.), but this is optional. If additional information is required, the FCPF will request it.
4. The text can be prepared in Word or other software and then pasted into this format.
5. For the purpose of this template, "Deforestation" is defined as the change in land cover status from forest to non-forest (i.e., when harvest or the gradual degrading of forest land reduces tree cover per hectare below your country's definition of "forest." "Forest degradation" is the reduction of tree cover and forest biomass per hectare, via selective harvest, fuel wood cutting or other practices, but where the land still meets your country's definition of "forest" land.
6. When complete, please forward the R-PIN to: 1) the Director of World Bank programs in your country; and 2) Werner Kornexl (wkornexl@worldbank.org) and Kenneth Andrasko (kandrasko@worldbank.org) of the FCPF team.

Country submitting the R-PIN: Vanuatu

Date submitted:

1. General description:

a) Name of submitting person or institution: Jotham Napat

Title: Designated National Authority, UNFCCC Focal Point, Director Vanuatu Meteorological Service, Chairman Vanuatu National Advisory Committee on Climate Change

Contact information: Address: PMB 9054, Port Vila, Vanuatu

Telephone: +678 22331

Fax: +678 22310

Email: jnapat@meteo.gov.vu

Website, if any:

Affiliation and contact information of Government focal point for the FCPF (if known):

Submitter is the National Focal Point for the FCPF

b) List authors of and contributors to the R-PIN, and their organizations:

Jotham Napat (details above), Brian Phillips (Secretary, Vanuatu National Advisory Committee on Climate Change), Watson Liu (Deputy Director, Department of Forests), Ioan Viji (Department of Forests), Sean Weaver, (Chief Technical Advisor, Vanuatu Carbon Credits Project, Carbon Partnership Ltd), Martin Herold (Technical Advisor, Vanuatu Carbon Credits Project; FSU Jena)

c) Who was consulted in the process of R-PIN preparation, and their affiliation?

This R-PIN was prepared jointly by

1. Vanuatu National Advisory Committee on Climate Change (NACCC) and
2. International Technical Advisory Team for the Vanuatu Carbon Credits Project (VCCP): Dr Sean Weaver (Carbon Partnership Ltd); Dr Martin Herold (FSU Jena); Murray Ward (GtripleC)

The NACCC is the governing board for the Vanuatu Carbon Credits Project (VCCP). The VCCP is the Vanuatu Government entity responsible for building capacity for REDD Readiness. The NACCC is comprised of senior public servants from several ministries and departments including the Meteorological Service, Department of Forests, Ministry of Lands, Ministry of Foreign Affairs.

2. Which institutions are responsible in your country for:

a) forest monitoring and forest inventories: Department of Forests

b) forest law enforcement: Department of Forests

c) forestry and forest conservation: Department of Forests, Department of Lands

d) coordination across forest and agriculture sectors, and rural development: Ministry of Agriculture, Ministry of Lands

3. Current country situation (consider the use of Annex 1 to help answer these questions):

Introductory remarks:

The Republic of Vanuatu would like to thank the Worldbank for this opportunity to present its status of REDD readiness and its strategies to take the next steps for full REDD participation. Vanuatu is seeking support for these efforts given the following general considerations:

- Vanuatu is small Pacific island state and least developed country with large amounts of its forest resources remaining.
- There is a strong commitment and highest level political support for participation in national and international REDD activities.
- All forests and forest lands in Vanuatu are owned by indigenous land owners with a cultural understanding of maintaining forests as natural resource and full respect for indigenous people living with the forests.
- With the current low activity of drivers for deforestation and degradation that are expected to increase due to economic development and increasing international pressure and demand of forest resources, it is a suitable time to effectively take preventive actions to maintain Vanuatu's forest carbon stocks in the long term. Thus, Vanuatu sees benefits from this process not limited to reduced carbon emissions, but to its standing forest carbon stocks, carbon sink capacities, and more general revenues from a low-carbon economy.
- Vanuatu considers the opportunities offered by REDD as one essential building block to achieve its development objectives in a climate friendly manner, and move towards a carbon neutral economy. This goal seems achievable in reasonable amount of time given the low emissions profile, political willingness, and the rather manageable size of Vanuatu. Linkages with other sectors and activities beyond reducing emissions from forest loss (i.e. increase in forest carbon stocks, forest conservation, energy independence and biofuel production, agriculture/agroforestry/food security) are an implied part of this strategy.
- Maintaining Vanuatu's forest resources is important both for climate change mitigation and adaptation. Intact forests act as general buffer to lower negative climate change impacts, i.e. increasing rainfall intensity, droughts (El Nino), and in particular increasing cyclone activities.
- Vanuatu started to get ready for REDD in 2006 with a low initial capacities. The process to improve them has started but significant efforts are still needed for full REDD readiness. Due to low historical emission rates the requirements for the national carbon monitoring and accounting system, institutional capacities, and implementation efforts are minimal compared to countries with high rates of current forest carbon loss.
- Experiences gained by Vanuatu as part of its REDD readiness process could be a role model for other countries currently less involved in REDD readiness, i.e. from the Pacific region or other small states with large amounts of remaining forest resources.

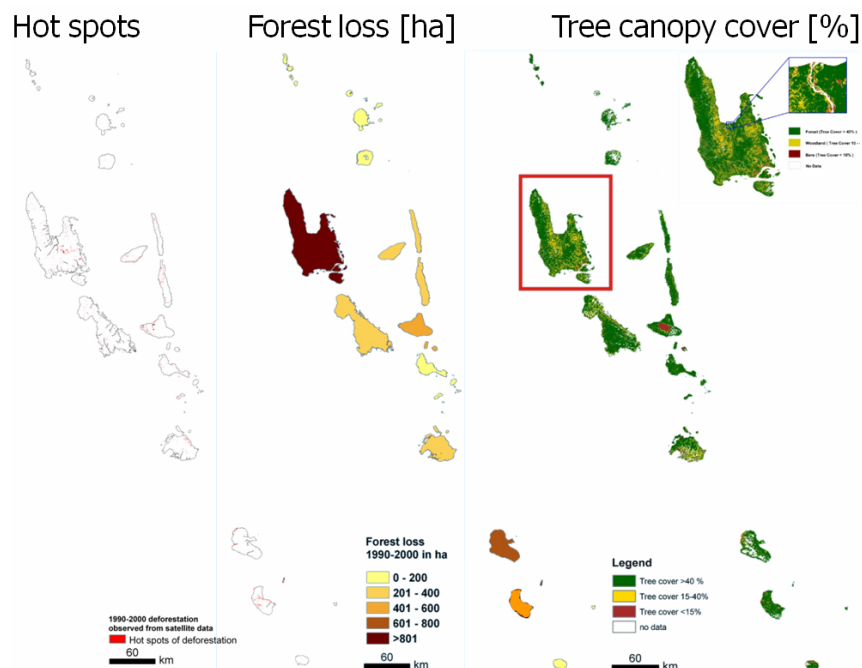
This issue is explained in more detail as part of this R-PIN.

a) Where do forest deforestation and forest degradation occur in your country, and how extensive are they? (i.e., location, type of forest ecosystem and number of hectares deforested per year, differences across land tenure (e.g., national forest land, private land, community forest, etc.)):

Vanuatu consists of 83 islands, about 220.000 inhabitants, and about 12.000 sqkm of land area. More than 90 % of the land area is covered more than 10-15% tree canopy cover (Figure 1) which includes primary forest land and other wooded land according to national definitions.

There is no full and comprehensive assessment of Vanuatu's deforestation and forest degradation history and related processes. However, Vanuatu has undertaken the first steps for national Forest Area Change Assessment as part of the Vanuatu Carbon Credits Project. Using satellite data, areas experiencing deforestation for 1990-2000 have been mapped and identified. A significant threat to forest carbon stocks in Vanuatu is forest degradation through high intensity selective logging followed by subsequent forest degradation caused by slash and burn agriculture and the effects of invasive weeds. Forest degradation occurs throughout the Vanuatu island group but is more prevalent on the larger islands such as Santo, Malekula, Efate, Pentecost, Erromango, Tanna, and Ambrym.

Figure 1: Results from the 1990-2000 gross deforestation assessment and forest cover mapping exercise completed for Vanuatu





The current stage of knowledge emphasizes rather low rates of historical forest loss compared to other nations in the region. There is a clear threat of increasing international pressure and drivers for Vanuatu, i.e. following the loss of timber resources in the Solomon Islands in coming years.

There is some deforestation caused by naturally occurring events such as cyclones and active volcanoes. Human-induced forest degradation often is the precursor to extensive damage amplifying the effects from natural disasters. With a large amount of remaining forests,

There is some level of deforestation caused through timber harvesting with the use of portable sawmills but is classified as being minor issue mostly in areas close to the main Centers like Port Vila, Luganville and Lakatoro. Other main causes of degradation of land close to the main Centers is mostly related to settlements taking up arable agricultural land.

All logging activities are concessioned and registered by the Department of Forestry (Figure 2).

Figure 2: Description of selective logging as degradation process in Vanuatu. The Forestry Department monitors concessions and timber harvests since 1990. The lower rate of harvesting of 2001-2004 compared to the late 1990ies reflects efforts by the government to lower the impact of forest degradation by international companies. A common problem of degraded forests is negative impacts of an non-native invasive vine hindering natural forest regrowth after logging impact.

Period	Volume (m3) average extracted per year	Logging
1990-1993	22013	
1994-2000	38239	
2001-2004	23871	
2005	7270	
		

b) Are there any estimates of greenhouse or carbon dioxide emissions from deforestation and forest degradation in your country? If so, please summarize:

There are no certain estimates of carbon emissions from the loss of forests for Vanuatu. The current understanding of historical emissions is shown in Figure 3. Carbon emissions from deforestation and degradation have declined in recent years, as part, due to actions by the government. Emission levels are rather low compared to international levels.

Figure 3: First draft historical assessment carbon emissions from deforestation and forest degradation based on (limited) data available. The data provide rough estimates with unknown accuracy; an effort that needs to be consolidated as part of the readiness phase.

Deforestation		Gross carbon emissions	
		IPCC Tier 1 estimate total	Annual (avg)
1990 - 2000	4306 ha deforested	~ 750.000 t	75.000 t
2000 - 2005	1700 ha (?) deforested	~ 300.000 t	60.000 t
Degradation		(selective logging)	
1990 - 2000	~340.000 m ³ harvested	~ 250.000 t	25.000 t
2000 - 2005	~100.000 m ³ harvested	~ 70.000 t	14.200 t
Total 1990-2000		~ 1.000.000 t	100.000 t
Total 2000-2005		~ 370.000 t	74.000 t

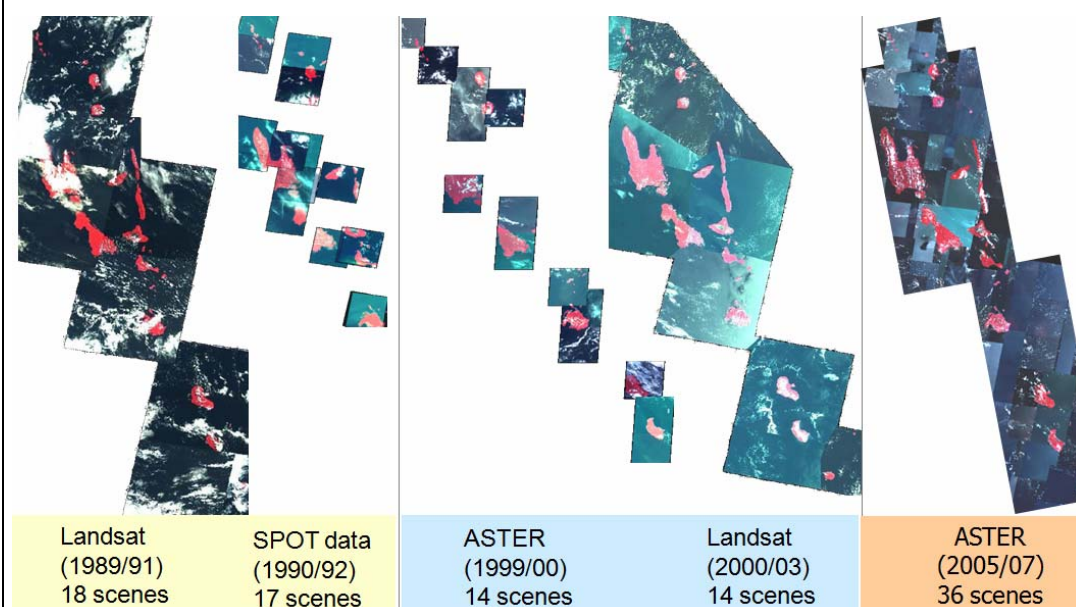
Vanuatu has started the process of developing a full and operational National Carbon Accounting System for the forest sector based on the IPCC good practice guidelines for LULUCF and AFOLU. Given this progress, Vanuatu could be ready to report on historical carbon emissions from deforestation using historical satellite data for area change and on the TIER 1 or TIER 2 level for carbon stocks in short time scale if funding is available for undertaking carbon stock assessments – Vanuatu sees this step as starting point to evolve a monitoring and accounting system over time.

c) Please describe what data are available for estimating deforestation and/or forest degradation. Are data published? Describe the major types of data, including by deforestation and forest degradation causes and regions if possible (e.g., area covered, resolution of maps or remote sensing data, date, etc.).

Vanuatu has started to gather data sources and implement demonstration activities to build a National Carbon Accounting System. The most important data sources available today in Vanuatu include:

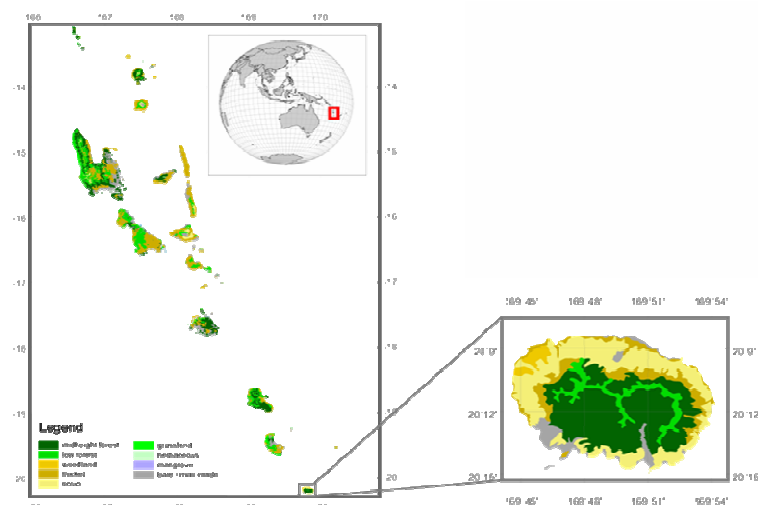
1. National coverage of Landsat-type satellite data for three time steps of about 1990, 2000, and 2005 to estimate the area of deforestation. Maps of gross deforestation exist for the periods 1990-2000 (nationwide, Figure 3). Figure 4 shows a series of historical Landsat data already available in Vanuatu to complete the historical assessment of forest area change. Given some constraints due to persistent cloud cover, Vanuatu is seeking to use Radar satellite data in synergy with the existing ones from optical sensors.

Figure 4: Overview of satellite data already available within Vanuatu for historical assessment of deforestation. The analysis of 1990-2000 has been completed



2. A National Vanuatu Resource Information System (VANRIS) containing information on essential digital (GIS) information on geographic features including topography, forest types, natural resources, transportation network, settlements etc. (Figure 5) is the current basis for land use planning and resource management. Thus, this information source is used by many governmental agencies but needs an update to be fully applied for national level REDD activities.

Figure 5: Distribution of major forest types for Vanuatu as defined by the VANRIS system



3. Annual information of logging concessions issued by the Department of Forestry (Figure 2).

4. A National forest inventory compiled for the year 1990. This inventory focused on estimating logging potentials and merchantable timber and needs to be assessed for its suitability to estimate carbon stocks.

5. In situ carbon data for some project –based case studies on sustainable forest management, agro-forestry and forest conservation on the islands of Santo, Efate and Erromango

d) What are the main causes of deforestation and/or forest degradation?

The drivers and amount of deforestation and degradation of forest varies for the different islands with most deforestation happening on the islands of Santo, Efate, Tanna and Erromango. Preliminary analyses on the national level suggest that about 50% of all deforestation is due to subsistence land use. Conversion to agriculture and subdivisions have been the most prominent causes of deforestation in recent years. The activities of international logging companies (particularly Malaysian companies) has played an important role in the reduction of forest carbon stocks in Vanuatu in the last 20 years, mainly forest degradation through high intensity selective logging. Currently there are no Malaysian logging companies in Vanuatu (they were expelled from the country in the late 1990s), but there is a chance they will seek to return once the economically available timber resource in the Solomon Islands is exhausted following 2014.

In addition, there is an expectation that economic development in the land sectors is going to increase in the coming years. For example, roads on the major islands will be paved in coming years and further land based development is planned and expected following improved road access to areas with potential for commercial agriculture. Urban and peri-urban development is expected to continue, and this is likely to be associated with some degree of deforestation as was observed with urban development between 2000 and 2005 on Efate (particularly near the capital Port Vila),

Strategically, this is an ideal time to redesign the Vanuatu forest sector development strategy to take current and future economic pressure off indigenous forests by setting up alternative forms of productive activities in the forest sector that can satisfy demand for forest sector economic development. Furthermore, a strategy that emphasized a stronger link between forestry and agriculture, through agroforestry would help to meet the demand for land-based production, timber as a raw material, whilst taking pressure off the natural forest resource. In addition to agroforestry, we see afforestation and reforestation to play an important role in helping to meeting the development needs of the forest sector whilst allowing natural forests to remain protected where possible and appropriate.

e) What are the key issues in the area of forest law enforcement and forest sector governance (e.g., concession policies and enforcement, land tenure, forest policies, capacity to enforce laws, etc.)?

Forest Law and Carbon

The ownership of timber rights on land is determined in accordance with custom. However this is much the same as all land rights and indeed ownership of the land itself. The Forestry Act requires non-custom owners or commercial forestry

operators to obtain licenses and permits in order to have timber rights for commercial forestry operations. The only exception to this is if trees are to be harvested for supply to other Ni-Vanuatu. The process for acquiring timber rights is set out in the Forestry Act. A Forestry Lease gives the leaseholder rights to the forest with the purpose: 'to establish, maintain and harvest timber from a crop of trees.'

The Forestry Rights Registration and Timber Harvest Guarantee Act (FRRTHG Act) defines a 'forestry right' in relation to land to include 'a carbon sequestration right in respect of the land'. A 'carbon sequestration right' is defined as follows:

"in relation to land, means a right conferred by agreement or otherwise to the legal, commercial or other benefit (whether present or future) of carbon sequestration by any existing or future tree or forest on the land"

These rights vest with the customary owners of the land, and with individuals that hold leases over land. As well as a forestry right the FRRTHG Act allows that a carbon sequestration right could be considered a *profit a prendre* (or a legal right to enter and take from the land).

The scope of the carbon sequestration right is very broad, and extends beyond strict legal rights associated with the carbon to also include commercial interests as well as any other types of beneficial rights that may be associated with the carbon. By allowing for rights with respect to existing and future trees the carbon sequestration rights are also applicable to regeneration and reforestation projects as well as those projects that involve the protection of existing forest.

While the definition of carbon sequestration right clearly applies to carbon credits based on *sequestration* of carbon, further examination is needed to determine whether or not it applies to carbon credits based on *emission reductions* generated by reducing rates of deforestation or forest degradation. The distinction between emission reductions and carbon sequestration is made as emission reduction credits are characterized as the absence of greenhouse gases in the atmosphere whereas carbon sequestration is normally associated with the storage of carbon in biomass. However, the definition of 'carbon sequestration right' under the FRRTHG should still be seen to cover both emission reduction credits as well as sequestration credits, as emission reductions generated by storing carbon in forests that would otherwise be destroyed should be considered another 'benefit ... of sequestration'. In other words, one of the benefits of maintaining carbon in existing trees is that it prevents carbon from being released into the atmosphere. Therefore, some clarification of legal definitions is needed as part of the institutional and governance capacity building for a national REDD program.

Land Tenure

Land tenure disputes among tribal groupings are a common feature in Vanuatu indigenous land use planning. It is important that any REDD Readiness capacity building include policy development to take sufficient account of land tenure issues associated with REDD activities.

Governance Capacity

The Department of Forests needs significant additional capacity to better manage the current forest estate and to manage and monitor new activities under REDD.

Consultation among relevant Forestry Stakeholders including; Lands, Council of Chiefs, Vanuatu National Council of Women, Vanuatu Christian Council, Provincial authorities and NGOs.

The Vanuatu Government has established a Designated National Authority but still needs to develop detailed approval criteria and procedures. One key dimension of the approval criteria and procedures is the need to take full account of the rights of indigenous peoples (resource owners) and the way any REDD project would be managed and how benefits would be distributed.

4) What data are available on forest dwellers in lands potentially targeted for REDD activities (including indigenous peoples and other forest dwellers)? (e.g., number, land tenure or land classification, role in forest management, etc.):

Unlike many other ex-colonies, the land and all associated rights were not vested in the Crown or Government, but in the native people as customary owners. This was entrenched in the 1980 Constitution, Chapter 12. The main sections of Chapter 12 set out that the land belongs to indigenous custom owners and that only indigenous citizens who have acquired their land in accordance with a recognized system of land tenure can own it in perpetuity.

Land can be leased for a period of up to 75 years. Leases are administered under the Land Leases Act by the government on behalf of the customary owners. This system allows the government to oversee lease transactions in accordance with article 79 of the Constitution, which requires government permission before land transactions can occur between Ni-Vanuatu (the indigenous people) and non-indigenous citizens.

It is perhaps worth noting that Vanuatu is also governed by its indigenous people with the parliament and the civil service overwhelming dominated by indigenous ni-Vanuatu.

All forest areas in Vanuatu are owned by indigenous people living in villages either in the forest or near the forest. All REDD activities will need to involve these people in decisions about the future management of their forest resources as an integral part of any future management regime for Vanuatu's forests.

Forest areas to be targeted for REDD activities have only been identified at a general level. As part of a REDD readiness program Vanuatu has prioritized the need to undertake the following as a national exercise:

1. Map existing protected forest areas (both those protected by law and those protected by customary instruments). The Department of Forests has a record of many areas protected by customary instruments but boundary surveys need to be undertaken and areas mapped.
2. Map areas considered to be a priority for protection
3. Map areas under threat from deforestation and degradation

This will assist in the development of a comprehensive strategy to identify specific areas to be targeted for REDD activities.

5. Summarize key elements of the *current* strategy or programs that your government or other groups have put in place to address deforestation and forest degradation, if any:

a) What government, stakeholder or other process was used to arrive at the current strategy or programs?

The current strategy for REDD readiness forms a major component of the Vanuatu Carbon Credits Project – a national program designed to build capacity to make use of carbon finance for climate change mitigation and sustainable development in a drive towards carbon neutrality for Vanuatu as a nation. This strategy integrates existing programs with a new purpose.

The Vanuatu Carbon Credits Project (VCCP) was developed as a partnership between the Vanuatu Government and a team of international technical advisors as a result of the SBSTA 24 call for demonstration activities for REDD policy development.

Key elements of the VCCP Phase 1 with respect to REDD are

1. identification of capacity building requirements in terms of national and project based carbon monitoring (carbon stock assessment)
2. national forest area change assessment mapping (more work and funds are needed to be done to complete this task)
3. initial identification of opportunities to address deforestation and degradation drivers
4. design of potential incentive mechanisms to be incorporated into methodologies for projects or programs for REDD. One is a project based mechanism (the Carbon Stock approach), one a sectoral mechanism (Sectoral Crediting Baselines), and the other a national mechanism (Direct Barter). These possible methodologies were included in the Vanuatu 2007 submission on REDD and presented at the Cairns workshop.

The completion of Phase 1 of the VCCP culminated with a national workshop of key stakeholders as a means of developing a "roadmap" for Phase 2. This was undertaken in Port Vila in February 2007. Key stakeholder groups included: Members of the National Advisory Committee on Climate Change, members of the International Technical Advisory Team, Vanuatu business representatives, and Vanuatu NGO representatives.

This workshop and its results are described in more detail in 6(d) below.

b) What major programs or policies are in place at the national, and the state or other subnational level?

The main programs (in general) are; National Priority Action Agenda, Ministerial Cooperate Plan, the National Forests Policy, Forests Act, Provincial Rural Economic Development Initiative Action programs. The REDD readiness program will integrate with these existing programs through the Vanuatu Carbon Credits Project, where the latter could be renamed to better reflect a broader mandate than merely the use of private sector carbon unit funding to protect forest carbon resources in natural forests.

6. What is the current thinking on what would be needed to reduce deforestation and forest degradation in your country? (e.g., potential programs, policies, capacity building, etc., at national or subnational level):

Vanuatu is one of the few countries that are governed by the indigenous people, where all forest lands are owned by the indigenous people, and where the indigenous people value their forests as an important component of their cultural and national heritage. There is also a strong emphasis on indigenous peoples active involvement and participation in the management of their own resources, sometimes in partnership with non-indigenous stakeholders.

Vanuatu sees it as a priority to build its institutional capacity for REDD through continuing to build momentum with its national climate change adaptation and mitigation efforts, and gain technical and financial assistance from international partners where possible.

Policies and incentive mechanisms need to be developed that generate measurable, permanent, and additional contributions to emissions reduction in the forest sector and the protection of carbon reservoirs where possible. To be “real” such activities need to be of a sufficient scale to be detected in local and national carbon stock and carbon emissions monitoring systems (measurable). To be “permanent” these activities need to involve a change in the deforestation/degradation development pathways in a locality, district, or country. Such a change in the development pathway is enabled by a shift or removal of the socio-economic and political drivers of deforestation/degradation in those (and often neighbouring) localities.

The removal of these drivers becomes possible only when the local and national political economy “accepts” an alternative development pathway. Such acceptance will only occur if/when a climate-friendly development option is perceived by local political and economic actors to be genuinely capable of delivering core development goals (as defined by those actors), at least as effectively as the Business As Usual path. A good example of such alternatives is the development of a substantial plantation resource and capability together with the establishment of a major agroforestry initiative. The Vanuatu Department of Forests is interested in building a strong agroforestry capability that is capable of both industrial and community agroforestry activities. Ideally this would be accompanied by the establishment of an agroforestry unit in Vanuatu that functioned as a training and research centre for agroforestry development in Vanuatu with possibly wider application to Melanesia.

The Vanuatu situation has shown that it is useful to consider how national level and nested project level commitments around baselines could be denominated in carbon stocks (versus just deforestation emissions and/or degradation emissions per se). This may provide a wider set of opportunities for sustainable forest management including agroforestry and timber plantations (i.e. a REDD program could then integrate carbon sink elements of activities as well, rather than forcing the need to frame these separately as A/R). This is particularly relevant to the design of programs capable of transforming the economic drivers of deforestation at the local and national level.

Removal of Deforestation Drivers

As mentioned above, the removal of these drivers becomes possible only when the local and national political economy “accepts” an alternative development pathway. In the Vanuatu forest sector we have identified opportunities to integrate projects designed to avoid emissions (REDD) with those that sequester carbon (A/R). This is particularly relevant to national land use planning for the productive sector where developing country governments may be reluctant to close off a strategic land use program of creating more productive agricultural lands. Vanuatu would support an incentive mechanism (and associated methodologies) that enables a shift in productive activities from deforestation and forest degradation to A/R and agroforestry in other land areas within or near the locality targeted for forest carbon stock protection. The key here is the ability to integrate REDD with A/R (plantations and agroforestry). Moreover our work in Vanuatu suggests there will often be energy related linkages as well, and we expect this may be the case in many developing countries.

As indicated, particular attention needs to be given to international developments and the potential of international leakage if major deforesting countries reduce their rates of forest loss (i.e. Indonesia or PNG), or run out of suitable forest resources (i.e. Solomon islands). With lots of forest remaining in Vanuatu, there is a threat of increasing deforestation and degradation pressure.

From a strategic point of view, agroforestry is an area that has great potential to enable the forest sector to shift to a more climate friendly format. This is because agroforestry is an activity that is capable of combining carbon sequestration with food production – particularly when producing nuts from tall canopy tree crops. The Pacific island countries of Papua New Guinea, the Solomon Islands and Vanuatu are well endowed with indigenous tree crop species with food production potential - especially nut species (e.g. ‘Galip’, ‘Ngali’ or ‘Nangae’ nut (*Canarium indicum*); ‘Karuka’ (*Pandanus julianattii*),

'Okari nut' (*Terminalia kaernbachii*), 'Pau' or 'Cutnut' (*Barringtonia procera* and *B. edulis*) and 'Aila' (*Inocarpus fagifer*); 'Finschia nut' (*Finschia waterhousiana*).

Other opportunities include linking REDD with A/R and bioenergy in an integrated cross sectoral approach to the issue. We have developed plans to explore these options in our REDD strategy (see Section 11c below).

a) How would those programs address the main causes of deforestation?

They would be required to evaluate the development needs and aspirations of indigenous resource owners and work with these resource owners to explore how these goals might be delivered by means of a REDD activity in combination with other forms of development (e.g. A/R activities). These programs would also explore options for working with concession owners to redirect their management plans to take into account the potential to engage carbon finance in their business model.

b) Would any cross-sectoral programs or policies also play a role in your REDD strategy (e.g., rural development policies, transportation or land use planning programs, etc.)?

Yes. The Vanuatu Government sees a fundamental link between forest carbon stock protection and economic development for forest owners. Such development need not be restricted to the forest sector and needs to be linked to rural development in the broadest sense. This is to ensure that all potential development options are able to be considered as part of an integrated strategy to address the loss of forest carbon stocks in natural forests.

c) Have you considered the potential relationship between your potential REDD strategies and your country's broader development agenda in the forest and other relevant sectors? (e.g., agriculture, water, energy, transportation). If you have not considered this yet, you may want to identify it as an objective for your REDD planning process.

Yes. As with b) above. Furthermore, we see it as essential to ensure that productive opportunities (and associated economic activities and multipliers) lost from the forest sector as a consequence of REDD are made up elsewhere in the Vanuatu economy. These may take the form of forest sector activities (plantation forestry or agroforestry) on other lands, or other forms of development (e.g. intensifying agriculture, tourism). Such alternatives need to be fully capable of addressing strategic development opportunity costs associated with forest protection in a country that is attempting to develop by means of increasing the size and diversity of the productive sector. This is because we recognise that forest protection can represent the loss of economic development opportunities on cleared lands (e.g. agriculture or plantation forestry for example) that in their aggregate may have a higher economic value than carbon finance is capable of delivering. Vanuatu does not hold the view that productive activity lost from one sector will automatically shift investment to another part of the economy. This is partly because investment itself is in short supply in the Vanuatu economy.

d) Has any technical assistance already been received, or is planned on REDD? (e.g., technical consulting, analysis of deforestation or forest degradation in country, etc., and by whom):

The Vanuatu Carbon Credits Project (VCCP) was initiated by Dr Sean Weaver (Carbon Partnership Ltd and Victoria University of Wellington) following a request in May 2006 by the UNFCCC SBSTA Chair and negotiating Parties for demonstration activities to inform intergovernmental policy development on Reducing Emissions from Deforestation in Developing Countries.

The purpose of this project is to:

- a. build capacity to assist Vanuatu to gain access to carbon and ecosystem services finance for climate change mitigation and sustainable development in the forest and energy sectors, and
- b. inform international policy development as a consequence of demonstration activities

The Vanuatu National Advisory Committee on Climate Change is the Governing Board for the Project and project owner. The VCCP is divided into different Phases:

	Year	Objectives
Phase 1	2007	Project design, building initial stakeholder relationships, design project governance structures and operational procedures, capacity building (forest area change assessment), international policy

FCPF R-PIN Template

Phase 2	2008	Capacity building, refinement of project governance, refinement of international and domestic stakeholder partnerships, fund raising for Phase 3
Phase 3	2009-2011	Establish national forest monitoring capability, historical reference scenario and projected emissions, capacity building, demonstration activities

Project development funding received during 2007/8 for Phase 1 activities:

Source	Purpose	Funds (US\$)
Victoria University Research Grant	Project design	40,000
Victoria University in kind contribution	Project management	20,000
UK Govt Global Opportunities Fund	Forest area change assessment	166,000
UK Govt Global Opportunities Fund	Socio-economic Good Practice guidelines	12,000
NZ Royal Society & German Government ISAT funding	Capacity Building RS / GIS and research collaboration	31,000
NZ Ministry for the Environment	VCCP Phase 2 Road Map Workshop	33,000
Total		302,000

Phase 1 Outputs

Output	Status	Outstanding Tasks	Funding Required?
Project Design	Draft Complete	Write up in final report*	No
Forest Area Change Assessment	Complete (1990-2000)	2000-2005 assessment	Yes
International policy	On-going	2008 UNFCCC Policy	Yes
Legal Analysis	Draft complete	Write up in final report	No
Socio-economic Good Practice Guidelines (REDD)	Draft complete	Write up in final report	Yes

Final Report due for completion by June 2008.

Phase 1 International Technical Advisory Team:

	Institution	Country	Role
Dr Sean Weaver	Victoria University of Wellington & Carbon Partnership Ltd	NZ	Fund raising, project design & coordination, international policy, Socio-economic GPG
Murray Ward	GtripleC Ltd	NZ	Project/program Design and international policy
Robert O'Sullivan	Climate Focus Ltd	USA	Carbon finance, legal analysis
Dr Martin Herold	FSU Jena	Germany	Remote sensing and deforestation analysis
Tim Hewitt	Sustaining Balance	NZ	Economic analysis (Biofuels)
Dr Ian Payton	Landcare Research (NZ)	NZ	Forest inventory planning
Dr Michael Gavin	Victoria University of Wellington	NZ	Socio-economic Good Practice Guidelines
Amanda Leathers	Victoria University of Wellington	NZ	Community development dimensions of demonstration activities
Olivia Warrick	Victoria University of Wellington	NZ	Linkages between mitigation and adaptation
Erneus Kaijage	Victoria University of Wellington	NZ	Community Development
Sarah Brikke	Victoria University of Wellington	NZ	Community Development
Lydia Holt	Victoria University of Wellington	NZ	Vanuatu Legal Review

Phase 1 of the VCCP is complete and focused on activities for the evolution of a national forest monitoring system, and the development of potential national and sub-national implementation activities. Efforts included project establishment, design, building initial stakeholder relationships, project governance structures and operational procedures, capacity building, national forest area change assessment, socio-economic good practice guidelines, and international policy.

The REDD related monitoring in Vanuatu follows an approach advocated in the IPCC Good Practice Guidelines (2003 and 2006) of deriving the area of deforestation (from satellite data) and changes in carbon stocks (primarily from ground data). Progress was made in terms of the deforestation activity data by developing a historical satellite image database for three time steps (data from 1990-2000-2005 [+/- 2 years]) exploring Landsat, SPOT, and ASTER archives. A full coverage is available for these three time steps for all Vanuatu's land areas with some constraints in areas of persistent cloud cover (~10-20% of area not available for change analysis). An assessment of gross deforestation area for the period 1990-2000 has been completed. The results indicate comparatively low rate of historical deforestation for Vanuatu with at least half of the observed forest loss being due to subsistence land use. Forest degradation has been an issue and will be addressed

in the next phase of developing the monitoring system.

Estimating the area of deforestation in Vanuatu, currently, relies on satellite observations. For 1990-2005 such data have been available for no or low cost, and Vanuatu encourages countries maintaining satellite observation and pre-processing systems, and in a position to do so, to help to provide continuous and consistent satellite image data suitable to support a national forest monitoring using the IPCC reporting guidelines.

The completion of Phase 1 was marked by a national VCCP Phase 2 Roadmap Workshop held in February 2008.

Outcomes of the Workshop included:

- Establishment of DNA (Designated National Authority) and recognition of need to design approval criteria and procedures as a core aspect of further institutional capacity building,
- MOU with International Technical Advisory team to set up a partnership with the Vanuatu government having full ownership of the activities and results,
- Definition of a set of priorities for national forest monitoring (details below)
- Development of an operational roadmap for Phase 2, including a number of potential demonstration activity types.

The Government of Vanuatu has developed the following set of priorities for capacity building and seeking international support for REDD readiness and implementation:

Forest priorities	Carbon credits dimension / REDD issues and opportunities
National forest inventory: <ul style="list-style-type: none"> ➢ Some useful existing data and experiences ➢ Goal: full national inventory of forest resources 	<ul style="list-style-type: none"> • Capacity building • Improve REDD readiness with full carbon stock assessment • Include remote sensing area change for historical emissions estimates (See below on “Vanuatu REDD Monitoring System Proposal”)
Conservation activities: <ul style="list-style-type: none"> ➢ Some existing, some to be initiated, some proposed ➢ Guidelines for monitoring and management 	<ul style="list-style-type: none"> • Carbon credits demonstration activities on “avoiding deforestation”, • e.g. for medium risk/concession areas e.g. Erromango Kauri/Sandalwood tree conservation area • Evolve national monitoring system • Inventory of existing and proposed of conservation areas
Production forestry/plantations: <ul style="list-style-type: none"> ➢ Focus on indigenous/local tree species ➢ Production of biofuels 	<ul style="list-style-type: none"> • CDM A/Reforestation projects to increase forestry/carbon sequestration/biofuel production capacities • Reuse invasive species plantations: Cordia Alliodora plantations / link to bioenergy • Monitoring/quantification of forest “sink” capacities
Research on Agroforestry	<ul style="list-style-type: none"> • Establish an Agroforestry unit and boost agroforestry capabilities in the Department of Forests • CDM projects for sustainable land use (of degraded forest area) with link to energy production • i.e. Butmas case of Agro-silvopastoral project and potential link with avoiding deforestation
Institutional capacity to engage in climate change issues	<ul style="list-style-type: none"> • REDD national monitoring capacity • Capacity building, support and participate in national/international policy development • Multiple benefits of improved forest monitoring
National forest policy to accommodate climate change issues	<ul style="list-style-type: none"> • Vision of “Carbon Neutrality” and role for forest sector • Option for climate change mitigation masterplan for Vanuatu • Role of forests/forestry in nationwide land use planning

The establishment of a national forest monitoring system for estimating forest area change and associated carbon emissions will provide the basis for Vanuatu’s REDD participation, and accounting and reporting framework. Progress has been made in the forest area change assessment. Capacities to estimate carbon stocks and carbon stock changes are currently weak, and Vanuatu intends to start with rather uncertain but conservative estimates (Tier level 1 and 2) and improve the estimations over time. Vanuatu is open to support from the international community to further establish a national level REDD relevant monitoring and carbon accounting system for the forest sector. More specifically, the Vanuatu REDD monitoring system improvement includes a number of proposed actions:

Overall monitoring objectives:

- 1) Finalize and consolidate 1990-2000-2005 national deforestation assessment from satellite data (incl. accuracy assessment)
- 2) Build Vanuatu's capacities to establish within country satellite data processing and analysis (incl. associated field surveys)
- 3) Complete project-based and national carbon stock and emissions assessment based on UNFCCC/IPCC Good Practice Guidelines
- 4) Support national and international policy development including joint benefits with other development priorities and ecosystem services

In addition, Vanuatu has identified opportunities to start dedicated demonstration activities with potentials to reducing emissions from deforestation and forest degradation, for the conservation of forests, and the increase of existing forest carbon stocks through sustainable forest management.

Proposed Forest Sector Demonstration Activities

Demonstration Activity	Some notable features
Demonstration 1: High Risk Area <ul style="list-style-type: none"> Target area with current active timber concession at risk for deforestation such as the Melcoffee Sawmill concession in South Santo (20,000ha) 	Potential REDD demonstration activity
Demonstration 2: Medium Risk Area <ul style="list-style-type: none"> Target areas where landowners are undertaking medium level timber extraction destined for forest degradation. Two possible areas: Kauri/Sandalwood forest (Erromango), Butmas mixed species rainforest (Santo) 	Potential REDD demonstration activity
Demonstration 3: Systematic weed control of invasive canopy weed <ul style="list-style-type: none"> Target area South Santo 	This an example of an integrated REDD and increased forest stocks (sequestration) project
Demonstration 4: A/Reforestation projects to address deforestation drivers by addressing timber and local employment demand <ul style="list-style-type: none"> Integrated forest/agroforestry of kava, coconut, whitewood, nangai, sandalwood plantation Whitewood timber plantation 	Addresses deforestation drivers as a necessary component of an integrated approach to REDD
Demonstration 5: Reuse invasive woody species plantations <ul style="list-style-type: none"> Combined removal of invasive species and use for bioenergy (electricity generation and copra drying) and replacement with indigenous species plantation for carbon sequestration and biodiversity improvement, or on-going energy crop <i>Cordia Alliodora</i> plantations (80,000 m3) with potential demonstration activities on (Ipota, Lelepa, Malakula, Santo or Banks). Logistically a feasibility study would best be located on Santo. 	<p>Addresses deforestation drivers as a necessary component of an integrated approach to REDD</p> <p>Linking REDD, with A/R and Energy. CDM bioenergy project</p>

7. What are your thoughts on the type of stakeholder consultation process you would use to: a) create a dialogue with stakeholders about their viewpoints, and b) evaluate the role various stakeholders can play in developing and implementing strategies or programs under FCPF support?

a) How are stakeholders normally consulted and involved in the forest sector about new programs or policies?

Key stakeholders in the forest sector in need of consultation around any new program include indigenous landowners, timber companies, local government and Department of Forests staff, together with any partner agencies to the Department of Forests (e.g. GTZ). Consultation with these stakeholders is normally conducted in the following way:

- Identification of program areas through relevant institutions
- through visitation and assessment involving authorities of relevant stakeholders
- consultations and contacts through medias such radios, TV, News Papers and pamphlets

Indigenous landowners play a central role in any changes in strategic direction for land-based development in Vanuatu. For this reason landowners are, by necessity, involved in decisions about such changes. Different stakeholders have different needs when it comes to consultation and dialogue and consultation processes need to take these differences into account. Workshops are an ideal means of communicating with timber companies, Department of Forests staff, local government and partner agencies to the Department of Forests. Landowners on the other hand tend to need a different style of communication to feel fully involved in any consultation process. Landowners need to be consulted using traditional forums for consultation and decision making in a village setting including church community structures, village committees, and traditional chiefly processes.

b) Have any stakeholder consultations on REDD or reducing deforestation been held in the past several years? If so, what groups were involved, when and where, and what were the major findings?:

The VCCP employed a process of participatory rural appraisal as part of its consultation process during Phase 1. This involved a case study of two rural communities – one on south Santo and the other on Pentecost. These consultations occurred during 2006/7. Consultations were designed to help the VCCP understand community development and community change processes in order to develop a set of Socio-Economic Good Practice Guidelines for REDD activities during Phase 2. During 2007 the VCCP also undertook consultations with timber industry players in Vanuatu as a means of understanding from them their priorities for potential involvement in REDD type activities on lands where they hold a timber concession.

Major findings of consultations with landowners were:

- Local priorities for economic development (defined in local terms) need to be understood by designers of REDD activities in order for these priorities to be built into any REDD project or activity.
- Each community will have a different set of development priorities – although there will be many similarities between communities as well. Different REDD activities will need to take specific local priorities and circumstances into account rather than basing the design of an activity on generalizations about community development.
- Rural indigenous communities often have internal disputes that need to be addressed as part of the process of rolling out a REDD activity. Failure to do so can jeopardize project success, project permanence, and product delivery (in carbon project terms)
- Forest protection is best delivered in a way that is perceived locally (by landowners) as a co-benefit of an effective form of community economic development. Such community economic development needs to integrate with local community structures and programs where possible.
- Mindful of land tenure disputes it is best to pursue REDD activities in places where such disputes are not occurring

c) What stakeholder consultation and implementation role discussion process might be used for discussions across federal government agencies, institutes, etc.?

n/a

d) Across state or other subnational governments or institutions?

VCCP and NACCC process is established to achieve this within the Vanuatu Government but needs extension to include local government participation in dialogue as demonstration activities and capacity building impacts on particular localities (provinces and communities)

e) For other stakeholders on forest and agriculture lands and sectors, (e.g., NGOs, private sector, etc.)?

Annual multi-stakeholder workshops (2008-2012) would allow for the inclusion of a wide range of stakeholder groups. This would enable the strategic outcomes to take best advantage of the experience and viewpoints of several stakeholder sectors and as a consequence strengthen a national program.

f) For forest-dwelling indigenous peoples and other forest dwellers?

Through the Forestry extension programs, conduct awareness, field days and regular field visits and conducting an annual (touring) landowner workshop (2008-2012). These workshops will involve the forest dwellers in research and surveys such as studying plant propagation techniques and forest resource inventories. They will also enable the dissemination of community agroforestry information, methods and techniques and support.

8. Implementing REDD strategies:**a) What are the potential challenges to introducing effective REDD strategies or programs, and how might they be overcome? (e.g., lack of financing, lack of technical capacity, governance issues like weak law enforcement, lack of consistency between REDD plans and other development plans or programs, etc.):**

Implementing REDD strategies for Vanuatu have to rely on developing and establishing a national carbon accounting system and a national program for REDD implementation.

Concerning a national carbon accounting system, Vanuatu's capacities are in its infancy and basic technical capabilities need to be built and established in the relevant national authorities. Common problems of lacking or conflicting monitoring standards or inefficiency due to unsuitable and inconsistent methods do not exist for Vanuatu. There is willingness to accept international support to build basic capabilities and achieve REDD readiness.

Some areas require particular technical capacity building:

1. Develop a sustained program for measuring and estimating forest sector carbon sinks and sources, including a centralized data management system
2. Establish a national level carbon accounting system (among different sectors)
3. Evolve capacities for UNFCCC reporting purposes
4. Planning and management of project-level activities for REDD implementation and sustainable forest management
5. Policy and approval procedures need to be developed for the Vanuatu DNA

b) Would performance-based payments through REDD be a major incentive for implementing a more coherent strategy to tackle deforestation? Please, explain why. (i.e., performance-based payments would occur after REDD activities reduce deforestation, and monitoring has occurred):

Performance based payments would need to be linked to a high quality national monitoring system capable of demonstrating performance levels. Such payments would provide a compliance incentive with a particular set of objectives for different stages/phases of REDD program development. This is particularly relevant if consequential objectives (e.g. later phase activities) were able to be financed on the basis of demonstrated performance in earlier phases. This would provide a useful means of maintaining momentum and adherence with progressive goals along a REDD path. This is particularly relevant to the political economy dimensions of shifting deforestation and degradation drivers, in the face of likely future pressures on forest resources as timber resources in other countries in the region become scarce (e.g. Solomon Islands).

9. REDD strategy monitoring and implementation:**a) How is forest cover and land use change monitored today, and by whom? (e.g., forest inventory, mapping, remote sensing analysis, etc.):**

The Vanuatu Government has started to establish a national monitoring system as a key aspect of the Vanuatu Carbon Credits Project and sees this as a priority for REDD readiness. Besides existing and outdated data sources such as the Vanuatu Resource Information System (VANRIS) and a forest inventory (1990) that is used by government agencies, the VCCP is the first full national approach to assess deforestation area and associated processes. Vanuatu needs financial and technical support to continue the development of a forest monitoring system. This system should include components to assess change in forest cover and estimate associated changes in carbon stocks.

Currently, evolving the forest monitoring system has relied on the assistance from international experts, and further international help is anticipated to establish the historical emission reference scenario (1990-2005). However, the aim is to develop in country capacities over the next 2-3 years so Vanuatu is able to maintain a national carbon accounting system for the forest sector.

b) What are the constraints of the current monitoring system? What constraints for its application to reducing deforestation and forest degradation? (e.g., system cannot detect forest degradation of forest stands, too costly, data only available for 2 years, etc.):

For the historical period, data availability limits the abilities to estimate forest related carbon emissions. This situation is similar for many developing countries. Vanuatu will be able to estimate and report emissions on a similar level then other countries with little existing REDD monitoring capabilities. Full national satellite data coverage is available for about 1990, 2000, and 2005 to estimate the change in forest area for three time steps. Carbon stock changes may build upon the 1990 forest inventory (usefulness and accuracy unknown) and a new forest inventory that needs to be established for full REDD readiness. A realistic goal for Vanuatu would be to report on TIER level 2 for deforestation caused national carbon emissions between 2000-2005, and, with more investments (and presumably lower certainty) between 1990-2005. Vanuatu recognizes the potential uncertainties in the estimates of forest area change and carbon stock change, and the need for an independent accuracy assessment using a sample of higher quality data/estimates as integral part any monitoring system to link to a crediting system. Uncertainties will be quantified and reduced as far as practicable and estimates will not be overestimated (conservativeness principle). Accuracy and efficiency will evolve over time.

Some information on forest degradation exists (i.e. logging concession inventory). Further detailed studies are needed to fully study degradation processes, their carbon emissions, and potentials to offer reduction potential for REDD implementation. The current logging concession inventory needs to be extended to gather spatially explicit data for areas undergoing degradation. Regular satellite observations will be used to assess the consistency and quality of this assessment.

There is a clear objective for Vanuatu to establish its historical emissions reference by the middle of 2009 (at least on a Tier 1 level) to strengthen its UNFCCC negotiating position. Vanuatu is willing to contribute to the post 2012 climate agreement, however, requires basic understanding of the potentials of the REDD process to evolve in the negotiations.

c) How would you envision REDD activities and program performance would be monitored? (e.g., changes in forest cover or deforestation or forest degradation rates resulting from programs, using what approaches, etc.)

A national carbon accounting system would integrate and provide sustained monitoring for all aspects, (national and sub-national) activities, and processes to reduce carbon emissions and stabilize forest resources. Since a REDD monitoring system has to be built from the beginning, Vanuatu could benefit from a technically advanced and efficient monitoring system based on the latest international standards. Key principles for Vanuatu are to use existing IPCC guidelines, inclusion of an uncertainty assessment, consider the conservativeness principle and follow UNFCCC reporting requirements. Performance measurements would vary for different implementation approaches (national versus sub-national activities) and for different carbon preserving efforts relevant for Vanuatu:

- Reducing emissions from deforestation and forest degradation (reduced future carbon emissions compared to historical reference)
- Forest conservation and avoiding forest carbon emissions (maintain carbon stocks or reducing emissions compared to

expected future reference of higher emission)

- Sustainable forest management (increase forest carbon stocks over time)

10. Additional benefits of potential REDD strategy:

a) Are there other non-carbon benefits that you expect to realize through implementation of the REDD strategy (e.g., social, environmental, economic, biodiversity)? What are they, where, how much?

The Government of Vanuatu recognises many co-benefits associated with REDD activities and for this reason is very supportive of making significant progress in this sector, particularly at a time in our history when the economic pressures on our natural forests are not as high as they are likely to get in the future – making it potentially easier to secure the protection of valuable carbon reservoirs in the near term.

Our forests provide countless ecosystem and cultural services to our people in a manner that has been long recognised by our indigenous cultures, and also by the Government. These services include water quality and quantity protection, biological diversity (including many species that are harvested from natural forests), non-wood forest products (many of which are integral to our indigenous cultures), local climate services, medicinal plants, assets for our growing nature-based tourism sub-sector and as part of our national image as a South Pacific island nation. These kinds of co-benefits are very important to our economy and our culture and for this reason we see carbon protection as one part of a large equation of benefits for REDD activities. We also recognise that many of these ecosystem services protected when we protect our natural forests are of international importance, including our contribution to biological diversity conservation (species, habitats, and genetic resources), and our contribution to regional and global climate change mitigation.

Natural forests are widespread in our country and so these kinds of benefits are spread throughout the country wherever rainforests occur. The key for Vanuatu is to secure the protection of as many of these areas as possible in the coming years, in a manner that enables us to continue developing economically. We believe that if we get this development strategy right we can prosper whilst protecting our part of the global environment and carbon stocks.

Another important benefit of an effective REDD program in Vanuatu is the opportunity to model this kind of activity for other developing nations including those in the Asia Pacific region. Vanuatu aims to continue to play a leadership role in its international relations (particularly with its Pacific Island neighbours) and hopes that any progress made on REDD in Vanuatu can provide a case study to generate lessons learned that will assist other nations to reduce emissions in the forest sector. Accordingly, Vanuatu sees its REDD program as more than a national contribution to climate change mitigation, but more as a contribution to an international team effort along side, and hopefully in partnership with other nations.

b) Is biodiversity conservation being monitored at present? If so, what kind, where, and how?

There are a number of biodiversity conservation initiatives with management committee at rural levels and national levels. Reporting is through the management committee at the conservation areas to the national level. These are coordinated by the Department of Forests and also the Environment Unit within the Ministry of Lands.

c) Under your early ideas on introducing REDD, would biodiversity conservation also be monitored? How?

We are interested in ensuring that any REDD activities were beneficial for biological diversity but we are constrained in resources available to undertake the scale of monitoring that would be required to do this. We are aware that if we are able to better monitor biological diversity and integrate biological diversity data into REDD activities it increases our ability to ensure that REDD projects include significant biological diversity co-benefits.

d) Are rural livelihood benefits currently monitored? If so, what benefits, where, and how?

Monitoring of rural livelihood is monitored by relevant authorities. And assessments of benefits are stated in these surveys such as the Agriculture Survey and in forestry the National forest inventory – often conducted once every ten years.

e) Under your early ideas on introducing REDD, would rural livelihood benefits also be monitored? How?

Yes – this would be an integral aspect of a program designed to generate as many co-benefits as possible. It is fundamental to the success of REDD in Vanuatu that REDD activities are directly linked to helping resource owners

benefit from the development process. Ensuring that resource owners actually benefit from economic development linked to REDD activities necessitates both the involvement of resource owners in the design of REDD activities but also a benefit distribution mechanism in such activities that ensures that benefits are appropriately spread in the resource owner community. The need to involve resource owners in the design of REDD activities would be incorporated into the approval procedures and policies of our DNA.

In particular – monitoring of REDD activities for rural livelihood benefits would use the same methodologies already described in e) above.

11. What type of assistance are you likely to request from the FCPF Readiness Mechanism?

- **Identify your early ideas on the technical or financial support you would request from FCPF to build capacity for addressing REDD, if you are ready to do so. (Preliminary; this also could be discussed later.)**
- **Include an initial estimate of the amount of support for each category, if you know.**
- **Please refer to the Information Memorandum and other on-line information about the FCPF for more details on each category:**

a) Setting up a transparent stakeholder consultation on REDD (e.g., outreach, workshops, publications, etc.):

Stakeholder Consultation

1. Annual REDD workshop (2009-2011) with key stakeholders nationally
Financial assistance to run a national REDD workshop annually for 3 years. Each workshop will provide an opportunity for updates on REDD readiness and project activities, stakeholder consultations, technical training of Vanuatu government staff, and preparation of annual plans as part of a national adaptive REDD strategy process.

Estimated cost over 3 years: \$US102,000 (3x US\$34,000). This costing is based on the cost of undertaking a national workshop for the Vanuatu Carbon Credits Project in 2008.

2. Annual REDD touring workshops (2009-2011) with indigenous landowners locally
Financial assistance to run a series of REDD outreach workshops with landowners in each of the 6 provinces annually for 3 years. These outreach workshops to take place immediately following the National REDD workshop each year and will communicate the results and outcomes of the national workshop to landowner in the provinces. A team from the National REDD strategy will facilitate these workshops in the provinces.

Estimated costs: US\$5,000 for each provincial workshop. 6 annual workshops (1 per province) US\$30,000 annually.
Total cost over 3 years: US\$90,000.

Estimated Cost (for 3 years) US\$192,000

Sub-Total Estimated Costs (a) \$192,000

b) Developing a reference case of deforestation trends: Assessment of historical emissions from deforestation and/or forest degradation, or projections into the future.

1. Completion of Forest Area Change Assessment and IPCC tier 1 carbon stock calculation
2. National carbon stock inventory and IPCC tier 2 carbon stock calculation
3. Analysis of historical and projected emissions trends

National REDD Forest Monitoring System*Overall monitoring objectives:*

1. Finalize and consolidate 1990-2000-2005 national deforestation assessment from satellite data (incl. accuracy assessment)
2. Build Vanuatu's capacities to establish within country satellite data processing and analysis (incl. associated field surveys)
3. Complete project-based and national carbon stock and emissions assessment based on UNFCCC/IPCC Good Practice Guidelines

The detailed work items include:

Objectives 1 and 2:

- Complete national (2000-2005) forest area change assessment:
 - Establish pilot areas for cooperative change assessment and field surveys, while full national monitoring to be jointly completed by international partners and the Vanuatu national authorities (\$60,000)
 - Building Forestry Department capacities (interpretation training, hard/software, field surveying and assessment, \$20,000)
 - Sample areas to study degradation and associated emissions (\$15,000)
 - Third Party validation and accuracy assessment (\$46,000)
 - Test cases overcome known remote sensing challenges (cloud cover using Radar data) (\$10,000)
 - Logging concession inventory to be extended to gather spatially explicit data for areas undergoing degradation (\$20,000)
 - Study historical deforestation processes & drivers (\$15,000)

Estimated Cost: \$186,000

Objective 3:

- Inventory of available/historical carbon stock data (for potential level Tier 2 estimations):
 - Ongoing national forest monitoring regularly done by Forestry Department
 - Existing forest inventories (date, focus)
 - Ecological monitoring plots
 - Biomass plots
 - Project studies with field samples

Subtotal: \$25,000
- Extensive and intensive forest inventory for national carbon stock estimate
 - Preparation
 - Method review; overlay sampling grid and select sampling points; modify data analysis software; stratify sampling area and define boundaries; prepare data collection manual (\$35,000)
 - Field Work
 - Field equipment (\$39,000)
 - Assemble and train field crews (\$13,000)
 - Run pilot trial to determine C variability within strata; analyze these data and use results to finalize sample size and selection of plot locations (\$18,000)
 - Sample remainder of plot locations (\$38,000)
 - Quality control checks (\$12,000)
 - Shrub and litter harvest trial; wood decay modifier trial (\$9,000)
 - Post Field Work
 - Data entry, analysis, & final reporting (\$42,000)
 - Intensive Inventory Case Studies
 - Field studies and targeted remote sensing analysis (i.e. using GLAS-LIDAR) (\$45,000)
 - Apply IPCC LULUCF Tier 1-2 (Tier 3 optional) methods to derive historical carbon emissions with estimates for cost versus accuracy (\$15,000)
 - Co-Management (Technical Advisor Oversight) (\$15,000)

Subtotal: \$281,000
- Apply IPCC Good Practice Guidance for carbon emission estimations:
 - Start with suitable Tier-level and improve system over time (\$25,000)

Estimate Cost: \$331,000

National Data Management System

Vanuatu has formed a national Climate Change Database which would be the most appropriate location for a data management system. Vanuatu needs technical and financial support for establishing a data management system capable of supporting REDD and associated UNFCCC reporting in the LULUCF sector.

Requirements: Computer hardware, Software, Technical Training, Web server, Climate Change Data Infrastructure
Estimated Cost \$50,000

Mapping

1. Map existing protected forest areas (both those protected by law and those protected by customary instruments) and integrate into national forest monitoring data base
2. Map areas considered to be a priority for protection and integrate into national forest monitoring data base
3. Map areas under threat from deforestation and degradation and integrate into national forest monitoring data base

Estimated Cost: \$50,000

Forestry Department Capacity Building

1. Staff: 2 additional staff members (2009-2011). One manager (Job Title: VCCP Forests Operational Manager) and one technical (Job Title: VCCP Forests Senior Technical Officer). Staff members will be dedicated to REDD. The role of these positions would be to oversee national forest monitoring, develop means to address deforestation drivers, work with landowner groups to generate alternative development options for land owners, contributing to national and international policy, UNFCCC reporting. Cost: 2 salaries (\$110/day for 365 days = \$40,150) x 2 = \$80,300 p.a. for 3 years. Subtotal = \$241,000
2. Training:
 - a. National forest monitoring, domestic and international LULUCF and REDD policy (Technical Advisor 5 days per year @ \$1,200 = \$6,000, over 3 years = \$18,000, + accommodation and per diem of \$250/day (15 days total) = \$5,000): Subtotal = \$23,000
 - b. Higher education (postgraduate) training for two incumbent Department of Forests staff in forest monitoring, GIS and inventory (1 year study abroad for each @ \$40,000): Subtotal = \$80,000.
 - c. PhD scholarship in carbon-based agroforestry for 1 incumbent Department of Forests Staff (2 years training abroad @ \$40,000 = \$80,000.
 - d. Higher education scholarships for new 2 recruits (2 year masters degree abroad @ \$30,000) Subtotal = \$60,000
3. Technology: 4 laptop computers (\$8,000) and 6 desktop computers (\$10,000), 4 printer/scanners (\$2,000), 2 data projectors (\$3,000), software (\$8,000), data storage (\$1,000), mobile phones (\$3,000), telecommunication user charges including, establishing and running high bandwidth connections in 3 forestry offices for 3 years (\$10,000), 10 GPS units (\$7,000), filing system (\$1,000), forestry staff domestic travel for project training and meetings for three years @ \$5,000 p.a. (\$15,000); Subtotal = \$68,000
4. Establishment of Agroforestry Training Unit: \$50,000 per year for 3 years. Subtotal = \$150,000
5. Establishment/enhancement of 6 agroforestry nurseries (1 per province). Subtotal = \$30,000
6. Vehicle and fuel costs (2 vehicles: 1 Efate, 1 Santo \$100,000); fuel (\$10,000 p.a. for three years = \$30,000) Subtotal = \$130,000

Estimated Cost: \$862,000

Sub-Total Estimated Costs (b) \$1,479,000

c) Developing a national REDD Strategy: Identification of programs to reduce deforestation and design of a system for providing targeted financial incentives for REDD to land users and organizations (e.g., delivery of payments, governance issues, etc.):

DNA Policy and Approval Procedures

Develop overarching DNA policy and approval procedures associated with REDD activities incorporating

- a. Minimum project design criteria required by Vanuatu Government
- b. Clarifying rights of indigenous peoples and procedures for benefit distribution
- c. Clarification of appropriate legal instruments for carbon tenure for any market based mechanisms
- d. Project approval procedure for compliance and voluntary carbon market projects

Estimated Cost: \$21,000

Domestic Policy Analysis and Strategy Development for Shifting Deforestation and Degradation Drivers

1. National Scale

National forest protection options integrated with alternative development path options including plantation and agroforestry, and non-forestry (cross-sectoral) rural economic development. Integrating with national development policy and plans.

Technical Advisor 1: 10 days @ \$1,000 = \$10,000
 Travel/Accommodation/per diem (from NZ) \$4,000
 Technical Advisor 2: 5 days @ \$1,000 = \$5,000
 Travel/Accommodation/per diem (from NZ) \$3,000
 Subtotal: \$22,000 for three years \$66,000

Estimated Cost: \$66,000

Demonstration Activities

A. Feasibility Studies

1. Activity Type 1: High risk area

Melcoffee Sawmill concession area South Santo

Feasibility (Technical advisor: 10 days @ \$1,000 = \$10,000)

Domestic travel, accommodation/per diem for 3* for 10 days (\$4,000)

Subtotal: \$14,000

* 1 Technical Advisor and 2 Forestry Staff (and same for each below)

NB:

- The Government of Vanuatu will provide support for each of these feasibility studies by providing Government staff time and logistical support.
- Other parts of the project budget will support these feasibility studies through the VCCP Forests Operational Manager, VCCP Forests Senior Technical Officer, and VCCP Project Director).
- The execution of these feasibility studies will be bundled to generate economies of scale with respect to travel/accommodation of human resources.

2. Activity Type 2a: Medium risk area. Kauri/sandalwood (Erramanggo)

Feasibility (Technical advisor: 10 days @ \$1,000 = \$10,000)

Domestic travel, accommodation/per diem for 3* for 10 days (\$4,000)

Subtotal: \$14,000

3. Activity Type 2b: Medium risk area. Butmas (Santo)
 Feasibility (Technical advisor: 10 days @ \$1,000 = \$10,000)
 Domestic travel, accommodation/per diem for 3* for 10 days (\$4,000)
 Subtotal: \$14,000

The following demonstration activity aims to address a serious invasive weed problem associated with forest degradation. Merremia peltata forms a blanket canopy over disturbed forest areas inhibiting natural regeneration. Controlling this weed is integral to the control and management of forest degradation in Vanuatu.

4. Activity Type 3: Systematic weed control of invasive canopy weed that inhibits forest regeneration. Link weed control with activities designed to enhance carbon stocks either through forest regeneration or A/R activities designed to address deforestation drivers.
 Feasibility (Technical advisor: 10 days @ \$1,000 = \$10,000)
 Domestic travel, accommodation/per diem for 3* for 10 days (\$4,000)
 Subtotal: \$14,000

The following three demonstration activities form components of the strategy to address deforestation and forest degradation drivers by linking avoided deforestation and avoided degradation activities (1-3 above) with A/R type activities. See section 6 above for rationale.

5. Activity Type 4a: CDM A/R projects (addressing deforestation drivers associated with timber demand, linked to demonstration activities 1 - 3 above i.e. on Santo)
 Agroforestry sink (mixed species multi-purpose crop)
 Feasibility (Technical advisor: 10 days @ \$1,000 = \$10,000)
 Domestic travel, accommodation/per diem for 3* for 10 days (\$4,000)
 Subtotal: \$14,000
6. Activity Type 4b: CDM A/R projects (addressing deforestation drivers associated with timber demand, linked to demonstration activities 1 - 3 above i.e. on Santo)
 Whitewood timber plantation
 Feasibility (Technical advisor: 10 days @ \$1,000 = \$10,000)
 Domestic travel, accommodation/per diem for 3* for 10 days (\$4,000)
 Subtotal: \$14,000
7. Activity Type 5: Reuse invasive woody species plantations (*Cordia alliodora* plantations) and link to bioenergy (electricity generation) (addressing deforestation drivers associated with timber demand, and exploring cross sectoral synergies with energy, linked to demonstration activities 1 - 3 above i.e. on Santo)
 Feasibility (Technical advisor: 10 days @ \$1,000 = \$10,000)
 Domestic travel, accommodation/per diem for 3* for 10 days (\$4,000)
 Subtotal: \$14,000
8. Logistical Costs
 Technical Advisor (x2): International travel, Vila Accommodation/per diem (\$5,000)
 Chief Technical Advisor oversight and co-coordination with VCCP Project Director 5 days @\$1,000 (\$5,000)
9. Resource Person Contribution to Co-coordination of Demonstration Activities (i.e. partner with VCCP Forests Operational Manager and Chief Technical Advisor) \$20,000.
10. Independent Third Party Reviewer of Feasibility Studies
 1 day per activity @\$1,430 (\$10,000)

Estimated Cost: \$133,000

B. Fully Develop Carbon Market Products

11. Select 2 of the most promising activities for full development of carbon trading product. Seed funding of \$100,000 each as a contribution to the budget for the following costs:
 - a. Carbon associated project development costs (PIN, PDD)
 - b. Project implementation costs

Estimated Cost: \$200,000

International Policy Capacity Building

Support for active participation at UNFCCC REDD policy development through

1. Training of Vanuatu Government staff in REDD policy from VCCP International Technical Advisory Team
 - a. Integrated into annual REDD workshops and associated budgets

Cost: covered by Annual REDD Workshop Budget

2. Participation of Technical Advisors with Vanuatu delegation at UNFCCC REDD events (2009 – 2011) (SBSTA, COP, SBSTA workshops)
 - a. SBSTA participation by two technical advisors annually (2009-2011) @ \$6,000 per advisor (travel, accommodation) = \$12,000/yr for 3 years = \$36,000
 - b. COP participation by two technical advisors annually (2009-2011) @ \$6,000 per advisor (travel, accommodation): \$12,000/yr for 3 years = \$36,000

Estimated Cost: \$72,000

Project Director & AdministratorProject Director

Supporting a national REDD program will require project management and administrative support from the currently overloaded secretariat of the National Advisory Committee on Climate Change (NACCC). According to the operational structure of the Phase 2 Roadmap for the Vanuatu Carbon Credits Project, a VCCP Project Director position is needed (to be located in the NACCC Secretariat). Because the VCCP is split between forest and energy sector operations it is appropriate for the REDD component to fund half of this position. Funding from energy sector project funds will be sought for the other half of this position.

Salary - 0.5 position for three years (2009-2011) = $0.5 \times \$125/\text{day}$ for 365 days = \$22,813; 0.5 of total overhead costs (\$7,187) = \$30,000 p.a. for three years = \$90,000

Administrator

Supporting the VCCP Project Director. \$15,000 p.a. for three years (\$45,000)

Estimated Cost: \$135,000

Regional Outreach

Host two Pacific Island Forum REDD workshops (2009, 2011) as a regional leader in REDD, as a way to share experiences with Pacific Island Forum member states (Pacific Island Forum nations include: Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu). These two workshops will be timed to coincide with together both technical and policy staff from relevant Pacific Island countries including the Solomon Islands, PNG, Fiji, Samoa, Tonga, and Cook Islands Cost US\$50,000 per workshop x 2 = US\$100,000

Estimated Cost: US\$100,000

Publications**Book**

The Vanuatu REDD capacity building program will generate a lot of valuable information and experiences worth sharing with the wider REDD community in developing countries and those agencies in developed countries contributing to the REDD effort. The lessons learned in this program during the 2009-2011 period will be written up in a book format for publication with a suitable publisher. Costs for preparing this book include authorship time for Vanuatu government staff and technical advisors. To enable engagement with a publisher that can make this publication available at low market cost it will also be necessary to cover some of the production costs. (\$38,000)

Journal Articles

Furthermore, some of the findings of this program will be suitable for publication in journals, some of which have page charges. It is worth allocating funds to cover these costs to ensure widest dissemination opportunities. (\$2,000)

Web Site

It will be useful to develop a Vanuatu REDD program web site presence as a means of communicating with the wider practitioner community and providing regular program updates. This web site will need to be developed and maintained by the VCCP.

Web site development: \$5,000

Web Site maintenance over 3 years: \$5,000

Subtotal: \$10,000

Estimate costs: \$50,000

Sub-Total Estimated Costs (c) \$777,000

TOTAL COSTS	
Sub-Total Estimated Costs (a)	\$192,000
Sub-Total Estimated Costs (b)	\$1,479,000
Sub-Total Estimated Costs (c)	\$777,000
TOTAL ESTIMATED COST:	\$2,448,000

d) Design of a system to monitor emissions and emission reductions from deforestation and/or forest degradation:

The (to be established) national carbon accounting system will be the platform to gather and account all national REDD activities and related carbon estimates, and to communicate and report them to the UNFCCC. As indicated in the sections above, Vanuatu intends to establish such an accounting system in conjunction with national REDD implementation program. To start specific implementation activities, Vanuatu's see specific pilot activities a suitable way to stimulate climate finance and carbon crediting. All pilot projects will have to follow clear national guidelines to ensure that they are designed and carried out to achieve the national REDD priorities and to contribute to the national carbon accounting system. Perhaps more detailed carbon measurements are required for the project areas (i.e. IPCC Tier 3 for carbon stocks), while the national monitoring (at least initially) will operate on a more general level (i.e. IPCC Tier 2). A regular wall-to-wall satellite data analysis (at least every 5 years) will ensure that all loss of forest will be recorded on an objective and verifiable way to account for leakage and permanence. Project activities can profit from increasing capabilities of the national carbon accounting system (monitoring expertise, carbon stock data, emission factors, uncertainty assessment etc.) and vice versa. Eventually, Vanuatu's national carbon accounting system is able to report on the Tier 3 level and thus specific implementation activities can be established with rather little monitoring efforts.

e) Other?: None

12. Please state donors and other international partners that are already cooperating with you on the preparation of relevant analytical work on REDD. Do you anticipate these or other donors will cooperate with you on REDD strategies and FCPF, and if so, then how?:

Funding received during phase 1 of the Vanuatu Carbon Credits Project (for REDD readiness components of the VCCP)

- UK Government, Foreign and Commonwealth Office, Global Opportunities Fund
- NZ Government, Ministry for the Environment
- Victoria University of Wellington
- Government of Vanuatu

Funding support is being sought from other donors including:

- European Commission. We are in discussions with the EC for possible funding through the Global Climate Change Alliance (GCCA) with Vanuatu being named as a pilot country for this initiative. Our discussions have focused primarily on funding for the implementation of the National Adaptation Plan of Action, and we would welcome a coordinated dialogue with the World Bank to link the GCCA initiative in Vanuatu with the FCPF to maximise synergies across the adaptation / mitigation boundary.
- Asian Development Bank (no formal contact has yet been made to the ADB but this is on our 'to do' list.
- UK Government - Global Opportunities Fund (for a second round of funding) – our intention is to seek funding again from the GOF although Vanuatu is not listed as a priority country for this fund.

13. Potential Next Steps and Schedule:

Have you identified your priority first steps to move toward Readiness for REDD activities? Do you have an estimated timeframe for them yet, or not?

The implementation timeline certainly depends on the availability of resources. Vanuatu is ready and willing to take on the next steps with different objectives and milestones for the next years:

2008: Estimate historical emission reference to strengthen Vanuatu's UNFCCC negotiation position

2009: Major developments to establish national carbon accounting capacities and national REDD implementation plan

2010: Finalize national REDD implementation strategy and legal/policy framework

2011: Development of pilot activities and estimation of related carbon credits

2012: Operational national program and achievements of first compliance carbon credits

14. List any Attachments included

(Optional: 15 pages maximum.) None