

Review of Cambodia's REDD Readiness: Progress and Challenges



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January 2011

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Foreword

With the understanding that deforestation contributes to about 20 per cent of global anthropogenic greenhouse gas emissions, Parties to the United Nations Framework Convention on Climate Change have been exploring ways to mobilise support for developing countries to protect and enhance their forest carbon stocks. With many countries having a poor record of forest management, and lacking human and financial resources, institutions, data, and technologies for monitoring, reporting and verifying forest carbon stock changes, the challenge is immense.

The Institute for Global Environmental Strategies (IGES) Forest Conservation Team is monitoring the development of national systems to reduce emissions from deforestation and degradation and enhance forest carbon stocks (REDD+). This report on national REDD+ readiness activities, progress and challenges in Cambodia is part of a series of IGES outputs on national REDD+ systems. The report was written by Amanda Bradley (Pact), who has been working in Cambodia since 1998 in the natural resources and environment sector, and who currently works for Pact as the Director of the Community Forestry Partnership Programme where she continues to guide implementation of community forestry and REDD projects in Cambodia. I would like to congratulate the author and the Forest Conservation Team for succeeding in bringing together this report which I anticipate will be useful to people working on REDD+ issues both in and outside Cambodia.

*Hideyuki Mori
IGES President
January 2011*



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The author is solely responsible for any omissions or errors of fact in this report.

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Table of Contents

Foreword	iii
Acknowledgements	iv
Table of Contents	v
List of Figures and Tables	vi
Acronyms and Abbreviations	vii
1. Introduction	1
1.1 Brief Background on the Forestry Sector in Cambodia	2
2. Developing a National REDD Strategy	5
2.1 Cambodia's Approach to REDD	5
2.2 Summary of Major Achievements to Date	6
2.3 Key Challenges	7
2.4 Work under the National REDD+ Task Force	10
2.5 REDD Organisations	12
3. National Forest Carbon Accounting and Monitoring, Reporting and Verification (MRV) Systems	14
3.1 Current Information on Forest Carbon Stocks and Emissions	15
3.1.1 Forest Definition	15
3.1.2 Land Cover and Forest Carbon Stocks	15
3.1.3 Forest Biomass Inventories	16
3.2 Future MRV Development	18
4. REDD Financing	20
5. Payment Distribution	23
6. Demonstration Activities	25
6.1 Oddar Meanchey CF REDD Project	25
6.2 Seima Protection Forest REDD Project	27
6.3 Other Initiatives	28
7. Capacity Building Needs	32
8. Conclusion	35
References	36



List of Figures and Tables

Figure 1.1: Forest cover map of Cambodia	2
Table 2.1: Direct and indirect drivers of deforestation and degradation in Cambodia	10
Figure 2.1: Steps in the national REDD Task Forces' work process	11
Table 2.2: Proposed new REDD+ Taskforce membership	12
Figure 3.1: Forest cover change in Cambodia	15
Table 3.1: Forest carbon stocks under each management agent	16
Table 3.2: Overview of sample plot establishment	17
Figure 5.1: Proposed revenue flows – Oddar Meanchey Carbon Project	24
Slide 6.1: Forest and grasslands, Oddar Meanchey (©Amelia Merrick)	26
Figure 6.1: Seima REDD project location	27
Table 8.1: Agency roles and capacity building requirements for REDD+	34



Acronyms and Abbreviations

ADB	Asian Development Bank
AFD	Agence Francaise de Developpement (The French Development Agency)
ARBCP	Asia Regional Biodiversity Conservation Programme
ASEAN	Association of Southeast Asian Nations
AusAID	Australian Aid for International Development
C	Celsius
CC	Climate Change
CCAP	The Centre for Clean Air Policy
CCBA	Climate, Community and Biodiversity Alliance
CCI	Clinton Climate Initiative
CDM	Clean Development Mechanism
CF/s	Community Forest/s
CI	Conservation International
CITES	Convention on International Trade in Endangered Species
CO ₂	Carbon Dioxide
COP	Conference of the Parties
COP13	Thirteenth Conference of the Parties
CPA	Community Protected Area
DfID	UK Department for International Development
DME	Distance Measuring Equipment
DNA	Designated National Authority
ELC	Economic Land Concession
FA	Forestry Administration
FAO	Food and Agriculture Organisation (of the United Nations)
FAS	Sustainable Amazon Foundation
FCPF	Forest Carbon Partnership Facility
FFI	Flora and Fauna International
FiA	Fisheries Administration

FLEGT	Forest Law Enforcement Governance and Trade
FPIC	Free Prior Informed Consent
GDANCP	General Department of Administration for Nature Conservation and Protection
GERES	Groupe Energies Renouvelables, Environnement et Solidarités
GHG	Greenhouse Gas
GIS	Geographic Information System
Ha	Hectare
IGES	Institute for Global Environmental Strategies
INGO	International Non-Governmental Organisation
IUCN	World Conservation Union
JICA	Japan International Co-operation Agency
km	kilometre
KSPF	Keo Seima Protected Forest
m	metre
MAFF	Ministry of Agriculture Forestry and Fisheries
MLUPC	Ministry of Land Management Urban Planning and Construction
MoE	Ministry of Environment
MRV	Monitoring Reporting and Verification
Mt	Mega tonnes
NCAS	National Carbon Accounting System
NCCC	National Climate Change Committee
NFP	National Forestry Programme
NGO	Nongovernmental Organisation
NTFP	Non-timber Forest Product
NZAID	New Zealand Agency for International Development
ONF	Organisation National des Forêts
ONFI	Office National des Forêts Internationaux
PDD	Project Design Document
PES	Payment for Environmental Services
PFR	Production Forest
PPCR	Pilot Programme for Climate Resilience
PSP	Permanent Sample Plot
RECOFTC	The Centre for People and Forests
REDD	Reduced Emissions from Deforestation and Degradation
REDD+	REDD plus conservation of forest carbon stocks, sustainable management of forest, and enhancement of forest carbon stocks
REL	Reference Emissions Level

RGC	Royal Government of Cambodia
R-PP	Readiness Preparation Proposal
SBSTA	Subsidiary Body for Scientific and Technological Advice
SOP	Standard Operating Procedures
SPF	Seima Protected Forest
TGC	Terra Global Capital
TWG	Technical Working Group
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
US	United States
USAID	United States Agency for International Development
VCS	Voluntary Carbon Standard
WCMC	World Conservation Monitoring Centre
WCS	Wildlife Conservation Society
WWF	Worldwide Fund for Nature

1 Introduction

The opportunity for developing countries to secure revenues by protecting their existing tropical forests under the so-called REDD (Reduced Emissions from Deforestation and forest Degradation) mechanism has generated significant global interest and reinvigorated the forestry and conservation sector worldwide. The REDD concept was first introduced in 2005 by a group of countries called the Coalition for Rainforest Nations, and it received broad support at the United Nations Framework Convention on Climate Change's (UNFCCC) Thirteenth Conference of the Parties (COP13) in December 2007 in Bali. With around 20 per cent¹ of global carbon emissions generated as a result of forest loss, REDD² was seen as an effective solution to both reducing emissions and preserving existing forests. Cambodia's Minister of the Environment, H.E. Dr. Mok Mareth, was at the Bali conference, and in his speech, he expressed the Royal Government's strong support for the REDD mechanism, stating "Cambodia strongly supports the inclusion of Greenhouse Gas (GHG) emission reduction from forest conservation and avoided deforestation in post-Kyoto regimes." His words heralded

a flurry of interest and activities within Cambodia, demonstrating the country's intention to ready itself for REDD.

This document provides an overview and status report on Cambodia's REDD readiness. REDD readiness is a term which encompasses a range of preparatory activities that position a country to receive investments and effectively implement REDD at both the national and sub-national levels. These activities include preparing REDD country strategies and plans, forming or designating institutions to manage REDD at national and subnational levels, developing a national baseline and tools for measuring and monitoring forest carbon stocks including national forest carbon accounting systems, REDD financing and payment distribution, demonstration activities, and capacity-building.

It is important to remember that the REDD mechanism is still under development, and thus REDD readiness as a concept is also in flux. With technological improvements, implementation experience on the ground, international policy deliberations, and the development of the carbon market, REDD

1. CIFOR. 2009. *Simply REDD – CIFOR's guide to forests, climate change and REDD*. p. 1.
2. Later on the term REDD+ (REDD plus), which expands the scope of REDD to include conservation of forest carbon stocks, sustainable management of forest, and enhancement of forest carbon stocks, was introduced.

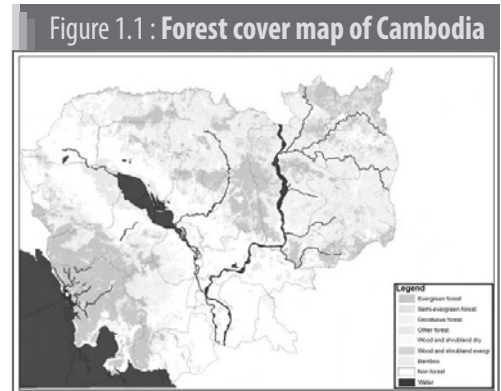
readiness is likely to evolve and take on new meanings.

This paper is a snap-shot based on the current understanding of REDD. It relies on a review of related reports and strategy documents, as well as interviews with key officials in the Government and among the civil society sector. It is recommended that Cambodia's progress towards REDD readiness is tracked and documented on an ongoing and regular basis. It is anticipated that in this quickly evolving sector, information on how the country is progressing and where the challenges and bottlenecks may lie will be extremely valuable to donors, investors, and policy makers.

1.1 Brief Background on the Forestry Sector in Cambodia

According to a 2005 analysis of satellite images, Cambodia has approximately 59 per cent forest cover, one of the highest proportions among countries in the region³. This proportion amounts to 10.7 million square hectares (ha) of forest, including large tracts of evergreen, semi-evergreen and deciduous forests concentrated in the southwest, east, and north of the country. Important forest landscapes from a biodiversity and watershed perspective include the Cardamom Mountains in the southwest, the Eastern dry plain forests of Monduliri, the central Prey Lang area, and protected forests in the northern provinces of Preah Vihear and Oddar Meanchey. There are also scattered Community Forests (CFs) throughout the country that are

vital to forest-dependent communities as a source of timber and non-timber forest products (NTFPs). With a predominantly rural population, the reliance on rain fed rice farming systems throughout the country highlights the importance of forests as buffers (or safety nets) in times of food scarcity and tempering influences on the micro-climate and hydrological systems.



Source: Courtesy of JICA (2002).

Effective management of forests in Cambodia is complicated by an institutional framework whereby several government agencies divide responsibilities. Jurisdiction over Cambodia's forests is divided primarily between the Ministry of Environment (MoE) and the Ministry of Agriculture Forestry and Fisheries (MAFF)⁴. The Ministry of Environment has jurisdiction over the country's extensive protected areas, covering 3.1 million ha of national parks, wildlife sanctuaries, protected landscapes, and multiple use areas. The MoE has issued a Protected Areas Law (2008) that attempts to zone the protected areas and includes the possibility for local communities to establish community protected areas (CPAs).

3. FA. June 2008. Cambodia forest cover. Forest cover map change 2002 – 2006.
 4. The Apsara Authority and Other Temple Authorities are responsible for managing the forested areas around the temple complexes (e.g. Angkor Wat).

MAFF has jurisdiction over the country's Permanent Forest Estate (about 70 per cent of the country's forest area) as well as the flooded forests and mangrove forests outside the protected areas system. Under MAFF, the Forestry Administration (FA) and Fisheries Administration (FiA) are tasked with direct management of the forest resources. In recent years, MAFF has approved new areas of Protected Forests and encouraged community-based forest management. Legislation has been passed making it possible for local communities to receive 15-year community forestry management agreements (CFAs) Some 94 community forestry sites have been legally recognised across the country, and there are approximately 300 additional sites in the pipeline for approval.⁵ The Government has set out an ambitious goal of eventually expanding community forestry to cover two million hectares.⁶

The 2001 Land Law made provision for community ownership of land by upland native ethnic minority communities, which are primarily located in the northeast. Steps have been taken to secure communal land titles, whereby 64 communities have established "indigenous identity" and 14 have registered as legal entities with the Ministry of Interior. These communities have yet, however, to receive formal land titles through the Ministry of Land Management, Urban Planning and Construction.⁷

In late 2009, with support from its development partners, the Royal Government

of Cambodia (RGC) completed the draft of its National Forestry Programme (NFP), a policy document to guide the long-term management of the country's forestry resources. The NFP articulates the country's goal of sustainable forest management and defines a set of sub-programmes and objectives which include: 1) Forest demarcation, classification and registration, 2) Forest resource management and conservation, 3) Forest law enforcement and governance, 4) Community forestry programme, 5) Capacity and research development, and 6) Sustainable forest financing. In theory, all support to the sector, including support for REDD, should be coordinated according to the NFP; however, there have been challenges in actively involving all relevant line agencies.

Amid a history of steady and rapid deforestation since the fall of the Khmer Rouge regime and a failed and suspended industrial logging concession system, there has been a shift in Cambodia in recent years to reform the forest sector and adopt more sustainable forest management practices. In 2002, Prime Minister Hun Sen issued a moratorium on logging throughout the country, leading to the cancellation or suspension of all industrial logging concessions. Nevertheless, despite this decree, forests continue to be cleared and degraded due to a number of reasons such as agricultural expansion (both small and large scale), illegal logging, infrastructure development, wood fuel demand and mining exploration.⁸

5. These 94 CFs cover 113,544 ha (K Phan, personal communication, Sept. 2010)

6. RGC. 2010. *National Forestry Programme*. p.108.

7. G Brown, 29 July, 2010, personal interview.

8. Cambodia UN REDD National Programme. 2010. United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, National Programme Document, September, 2010.

Threats to the existing forest remain high as business investments spur the conversion of forestland to agricultural plantations or economic land concessions (ELCs). Illegal logging continues, especially in border areas, and often with the involvement of the military or renegade soldiers⁹. Protected areas have failed to resist demands for mining and agricultural concessions within their boundaries. As a result of these pressures, the net annual rate of deforestation has been estimated at 0.5 per cent during the period 2002 – 2005/6 with some areas experiencing rates as high as two per cent per year.¹⁰

According to the Forestry Outlook to 2020:

The Cambodian Millennium Goals aim to maintain forest cover at 60% by 2015. Currently, insecure title over forested land and unclear rights to use de facto open access forest resources mitigate efforts to maintain the forest cover, to secure livelihoods or to contribute to rural economic growth in Cambodia. This situation reflects a lack of coherence in rural land management policies, weak capacities of sub-national sector line agency, departments, poor service delivery mechanisms and the limited involvement of rural land and resource users in formalised natural resource management procedures. The key challenges in the sector are the need to ensure sustainable management and equitable use of forests, to improve rural livelihoods, and to promote a balanced socio-economic development in Cambodia. Past forest management systems have not contributed sufficiently to these broad policy objectives.¹¹

In this context of relatively high forest cover combined with historically significant deforestation rates, there is great potential for REDD if protection efforts at both the policy and implementation levels can stem these rates. Further, recent policy shifts to allow more community-based forest management raise the likelihood for REDD benefits to reach local people. With increased political interest in Cambodia in sustainable forest management, REDD presents a timely and promising opportunity to reinforce existing protection efforts and shift investment focus towards improved forest protection.

9. McMahon, D. 2008. Assessment of community forestry sites and migration patterns in Oddar Meanchey Province, Cambodia. *Community Forestry International*, 16 March 2008.

10. FA. June 2008.

11. FA. 2010. *Cambodia forestry outlook study (Working Paper No. APFSOS II/ WP/ 2010/ 32)*. Bangkok: Food and Agriculture Organisation of the United Nations Regional Office for Asia and the Pacific.

2.1 Cambodia's Approach to REDD

Over the past two years, the RGC has demonstrated a strong commitment to developing a national REDD programme. In terms of institutions, the Forestry Administration has been leading this effort, while the Ministry of Environment, as the Designated National Authority under the UNFCCC, has concentrated on the Clean Development Mechanism (CDM). However, due to the recent efforts of the National REDD Taskforce, this situation has been changing and there is recognition that many related government agencies must be brought in to effectively coordinate efforts, with the MoE playing a more active role.

There are no universally accepted estimates of how much REDD could generate in annual average net income for Cambodia, and estimates have ranged widely.¹² The FA's current annual operating budget is approximately US \$1.5 million, and annual revenues from its programmes (auctioning of timber, etc.) to the national budget are estimated at US \$500,000 – \$600,000¹³,

so REDD would represent a significant increase in the capacity of the sector to generate revenues. While potential financial benefits are an obvious motivator, the RGC also recognises other advantages to invest in REDD, such as support to meet its forest cover objectives (60 per cent), protection of globally significant biodiversity, maintenance of the country's hydrology, and other environmental services related to the beneficial role of forests in adapting to climate change.

Cambodia is assessed as one of the most vulnerable countries in the region to climate change¹⁴; the Prime Minister and other high-level government officials have publicly expressed their concerns on climate change and the effects it may have on Cambodia. Cambodia is eager to demonstrate its commitment to addressing global climate change, while making sure that it receives adequate assistance to deal with the negative effects. In summary, REDD aligns well as a solution to existing and emerging national concerns.

12. The National Forestry Programme gives a figure of US \$25 million per year (RGC 2010, 17). An article in the Cambodia Daily newspaper quoted a figure of US \$200 million per year (15 December 2010, p. 29).

13. Thon, Sarath, 6 July 2010, personal communication.

14. Assessing Climate Change Vulnerability in the Greater Mekong Region, <http://www.panda.org/?uNewsID=171021> last accessed 2 November 2010.

2.2 Summary of Major Achievements to Date

Development of a national REDD strategy is an important goal for Cambodia as part of the REDD Readiness process, as it is for every other country preparing itself for REDD. According to the outcomes from COP 16 in Cancun, REDD should “be implemented in phases beginning with the development of national strategies or action plans, policies and measures, and capacity-building, technology development and transfer and results-based demonstration activities, and evolving into results-based actions that should be fully measured, reported and verified.”¹⁵ A national strategy for REDD outlines a country's approach to REDD. The development of the strategy in Cambodia has been primarily stimulated and supported by development partners, including the United Nations Development Programme (UNDP), the Food and Agriculture Organisation of the United Nations (FAO) and the Japan International Co-operation Agency (JICA), and in the future will be funded by JICA, the UN REDD Programme and the World Bank's Forest Carbon Partnership Facility (FCPF). Over the past three years, a number of steps have been taken towards laying the groundwork for developing Cambodia's national REDD strategy. Other development partners and nongovernmental organisation (NGOs) have encouraged and supported these efforts, either through technical assistance, data provision or capacity building. Below is a list of some of the major activities and achievements related to REDD, in chronological order:

- Establishment of the *National Climate Change Committee (NCCC)* – includes representatives from 21 ministries and is chaired by the MoE with the role of coordinating climate change related dialogue (2006)
- The RGC supported the *Bali Action Plan and Decision 2/CP.13* on REDD at COP13 in Bali (December 2007)
- Under Government Decision No. 699, the Council of Ministers endorsed the *first REDD demonstration project* in Oddar Meanchey covering more than 60,000 ha, with specific guidance on use of revenues and management by the Technical Working Group on Forestry & Environment (May 2008)
- The FA gave official sanction and support for a *second REDD demonstration project* in Seima Protection Forest in Mondulkiri province, covering 187,698 ha (October 2008)
- *Sub-Decree No. 188* was issued, designating the Forestry Administration as the official seller of REDD forest carbon credits for the Permanent Forest Estate and giving it responsibility for assessing the national forest carbon stocks, and executing and regulating forest carbon trading (November 2008)
- *National Monitoring Reporting and Verification workshop* (January 2009)
- Cambodia became a *member of the Forest Carbon Partnership Facility (FCPF)* following submission of its Readiness Project Idea Note (March 2009)
- *Training of six government officials on a National Carbon Accounting System (NCAS)* in Australia (September 2009)
- Cambodia was granted membership to the *UN-REDD Programme Policy Board*

15. Cultural Survival, 'Text of the Cancun Agreement on Climate Change', 12 June 2010, <http://www.culturalsurvival.org/news/mexico/text-cancun-agreement-climate-change> last accessed 18 January 2011

- with observer status (October 2009)
- *First National Forum on REDD+* sponsored by the Woods Hole Research Centre with participation of government, development partners, civil society and local and indigenous people (October 2009)
 - *Training Workshop REDD+ Partnerships for Government and Civil Society* organised by Institute for Global Environmental Strategies (IGES) and The Centre for People and Forests (RECOFTC) (February 2010)
 - UN-REDD convened a high level Government *REDD+ Task Force to draft the Roadmap* for Cambodia led by the FA with members from the Ministry of Land Management, Urban Planning and Construction and the MoE, as well as two NGOs; RECOFTC and the Clinton Climate Initiative (CCI) as observers (early 2010)
 - Official delegations have participated in all major meetings related to REDD policy development including Conference of the Parties (COP) and Subsidiary Body for Scientific and Technological Advice (SBSTA) meetings. *A national REDD Focal Point*, Dr. Omaliss Keo, has been appointed.
 - *Capacity building Workshops on Applied GIS (Geographic Information System) Application for Forest Carbon Stock Assessment and Forest Inventory to Assess Forest Carbon Stocks* organised by Winrock International under the regional USAID-supported Asia Regional Biodiversity Programme Conservation (ARBCP) (August-September 2010)
 - Two *national level consultation workshops* on Cambodia UN REDD National

REDD Programme Document (REDD Roadmap) (August-September 2010) and a *Civil society and indigenous people's consultation workshop* (2-3 September 2010)

- The *National Forestry Programme* with a sub-programme on Sustainable Forest Financing and a Working Group to lead activities was submitted to MAFF (October 2009) and was signed off by the Prime Minister (November, 2010)

2.3 Key Challenges

While there have been a host of activities to increase Cambodia's REDD readiness, there are a number of key gaps and concerns for future REDD implementation in Cambodia.

Lack of Clear Legal Framework

According to Oberndorf's legal review, "much of the policy and legal framework (in Cambodia) is quite new, and lessons are being learned in implementing the frameworks that will inevitably be used to amend or replace existing instruments. In addition, there are areas in the framework where gaps exist that need to be addressed."¹⁶ Important policy directives have been issued in an attempt to get REDD off the ground in Cambodia. For instance, Sub Decree 188 gives the FA the right to sell carbon credits for the Permanent Forest Estate, and Decision 699 sets out initial ideas on benefit sharing. However, the legal framework will require further clarification, including definition of the roles and responsibilities of different agencies at different levels. For example, it

16. Oberndorf, R. 2010. *REDD+ in the Cambodian context: An overview of the policy, legal and governance frameworks impacting implementation*. Report for the Cambodia REDD+ readiness process.

is not yet clear how REDD revenues will be channelled, who will have authority to sell credits in all jurisdictions, how a demonstration project can be nested in a national approach, and how liability for under-delivery will be addressed.

Demarcation of the Forest Estate

One of the major challenges is lack of clear demarcation of the forest estate. Without knowledge of where the borders of the forest estate are, it is a challenge to define the boundaries for sub-national REDD projects or to define a national REDD carbon accounting system. Under Sub-Decree 53 of the Forestry Law, "MAFF has the obligation to study and define permanent forest reserve areas¹⁷ for the whole country, based on forest coverage map, data on forest and non-forest land with clear coordinates in order to design a map of permanent forest reserve areas at national level." However, at current rates and with limited capacity and resources, the task of demarcating will take many years. There are currently pilot projects ongoing in four provinces (Preah Vihear, Monduliri, Kratie, and Kamptot) which are attempting to better define a consultative process for demarcation. The Wildlife Conservation Society project in Monduliri and Preah Vihear provinces has successfully defined a total of 276 km of forest boundary and contributed to the development of guidelines for the process. Following the consultation, boundaries

must be physically demarcated to aid the control of deforestation. This is an expensive process, due to the need to fabricate and install concrete pillars. Significant time and resources will be needed for effective demarcation of the entire forest estate¹⁸.

Secure Forest Tenure and Rights to Carbon

With forest dependence and poverty widespread in Cambodia, it is intended that REDD will alleviate poverty and improve local livelihoods. While tenure over forests does not necessarily guarantee rights to forest carbon revenues, it strengthens the chances for access to these benefits. Unfortunately, the system of land and forest titling in Cambodia currently face huge challenges, and well-resourced interventions have achieved only limited success¹⁹. Community forestry titling is possible but it is at an early stage, while the CPA legal framework is still incomplete. Furthermore, the existing legal framework for indigenous land titling is viewed as inadequate because most forest land cannot be included in communal titling and there are size limits for spirit and burial forests. For those tenure rights that do exist, they are at risk due to weak governance, poor coordination among ministries, and rent-seeking²⁰. As an example, the mining industry has been particularly egregious in its disregard for existing tenure by securing exploration licenses without local

17. Under the Forestry Law (2002), the Permanent Forest Estate is divided into 1) Permanent Forest Reserve, which is State Public Property, and 2) Private Forest.

18. Under the National Forestry Programme, the long-term goal is to demarcate a total 120,000 km of forest borders by 2029.

19. World Bank. 2011. 'World Bank ready to support Cambodia to improve living conditions of resettled people', <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/CAMBODIAEXTN/0,,contentMDK:22422420~pagePK:1497618~piPK:217854~theSitePK:293856,00.html> last accessed 9 November 2010

20. G Brown, 29 July 2010, personal communication.

consultation, also often within protected areas²¹.

Forest Permanence

Cambodia has achieved a degree of political stability in recent years. Nevertheless, there are concerns about the country's long-term commitment to REDD and the permanence of forests. As global demand for foodstuffs and biofuels increases, pressure is also increasing on the RGC to convert its forests to agricultural plantations. It is not yet clear whether REDD will be a sufficient incentive to maintain natural forest cover. A lot will depend on the market and how forest carbon credits along with forest ecosystem services are valued in relation to land use alternatives.

REDD Financing

There remains a critical gap in financing available for REDD start-up in Cambodia as discussed in more detail below. There is a risk that while efforts are made to make Cambodia REDD ready, the investments required for implementation will not be forthcoming.

Capacity to Enforce Forest Laws and Control Drivers of Deforestation and Degradation

At the national level, Cambodia is investigating the feasibility of a Voluntary Partnership Agreement under Forest Law Enforcement Governance and Trade (FLEGT), an EU effort to develop and implement measures to address illegal logging and related trade. Under the scheme, legally harvested timber could be exported to the EU by means of licenses issued in the signatory countries, and timber shipments without a permit would be denied entry.

At the local level and particularly in more remote areas, illegal timber harvesting continues, often with the involvement of the military and renegade soldiers.²² Drivers of deforestation are strong in comparison to the available resources for controlling them. Additional research is necessary to understand the dynamics involved in deforestation and degradation and to identify appropriate solutions. Table 2.1, which is from the Cambodia REDD+ Roadmap, identifies some of the direct and indirect drivers, based on a consultation among various stakeholders.

21. Hance, J. 1 September 2010. 'Secret titanium mine threatens Cambodia's most untouched forest', http://news.mongabay.com/2010/0901-hance_cambodia_mine.html last accessed 9 November 2010; and Bank Information Centre. 9 October 2009. 'Cambodian communities facing forced eviction launch Inspection Panel complaint against World Bank', <http://www.bicusa.org/en/Article.11515.aspx> last accessed 9 November 2010

22. McMahon, p. 17.

Table 2.1 : Direct and indirect drivers of deforestation and degradation in Cambodia

	Within the forest sector	Outside the forest sector
Direct	<ul style="list-style-type: none"> • Unsustainable and illegal logging • Fire (role disputed) • Unsustainable woodfuel collection (role unclear) 	<ul style="list-style-type: none"> • Clearance for agriculture • Expansion of settlements • Infrastructure development
Indirect	<ul style="list-style-type: none"> • Lack of demarcation of forest areas • Inadequate forest law enforcement • Low institutional capacity and weak policy implementation • Demand for wood energy for domestic and industrial use • Low efficiency of wood conversion and use for construction, energy production, etc. • Lack of incentives promoting sustainable management of forests • Lack of finance to support sustainable forest management activities by line agencies, local authorities and local communities • Lack of sustainable or alternative supply of wood and timber, including for wood energy to meet demand • Weak forest sector governance <ul style="list-style-type: none"> – Low levels of stakeholder participation and involvement; – Lack of transparency and accountability – Inadequate assessment of social and environmental impacts 	<ul style="list-style-type: none"> • Population increase • Poverty • Rising incomes and demands for resources • Increasing accessibility of forest areas • Low agricultural yields • Migration into forest areas • New settlements, including in border areas • Large-scale agro-industrial developments (including economic and social land concessions and other concessions) • Land speculation • Regional demand for resources • Poor Environment Social Impact Assessment regulations and lack of implementation • Governance <ul style="list-style-type: none"> – Weak forestland tenure – tenure is weakest in forests and other areas outside residential or farming zones – Weak enforcement of the law – Limited implementation of land registration (private and state) – Insufficient implementation of land-use planning – Overlapping/unclear jurisdictions • Social norms (claiming land through utilisation) • Economic benefits provided by sustainable management of forests at the national level often appear lower than alternative land-uses • Opportunity costs of sustainable management of forests at the local level • Low awareness of environmental roles of forests

Source: RGC (10 January 2011).

2.4 Work under the National REDD+ Task Force

Since January 2010, several development partners have been facilitating a National REDD Task Force to develop Cambodia's REDD+ Roadmap. Funds for supporting this process have been provided by the UNDP and FAO, with technical support from the UN-REDD Programme and the United Nations Environment Programme - World Conservation Monitoring Centre (UNEP-WCMC). The Task Force is currently led jointly by the FA

with the Director General of the FA serving as Chair; however, there is an understanding that after an interim period, a more permanent National REDD+ management mechanism will be put in place. Participating members currently include representatives from the FA, the MoE, and Ministry of Land Management Urban Planning and Construction, with CCI and RECOFTC as observer members from the NGO community. There is an intention to eventually expand the membership to other ministries.

The Task Force has divided its work process into three broad steps, with Step 1 in 2010 to prioritise writing the Roadmap, Step 2 to implement the Roadmap, and Step 3 to implement REDD (Fig. 2.1). The timeframes for Steps 2 and 3 are not defined and will depend on the pace of progress towards capacity-building and development of policies and legislation.

In addition, the National REDD Task Force has commissioned a series of background papers covering the following topics:

- Assessment of land use, drivers of land use change and forest governance (FAO);
- General review of legal, policy and institutional arrangements relevant to REDD+ (consultant legal team);
- Assessment of potential REDD+ co-benefits (UNEP-WCMC);
- Review of REDD+ consultations (consultancy, with inputs from The IDL Group under the ARBCP);
- Review of social and environmental safeguards (consultancy);
- Technical assessment of possible options for Monitoring, Reporting and Verification (MRV) and setting Reference Levels (Winrock International, partly funded by the ARBCP);
- Capacity needs assessments and follow-up trainings for MRV and reference

emissions level (REL) (ARBCP);

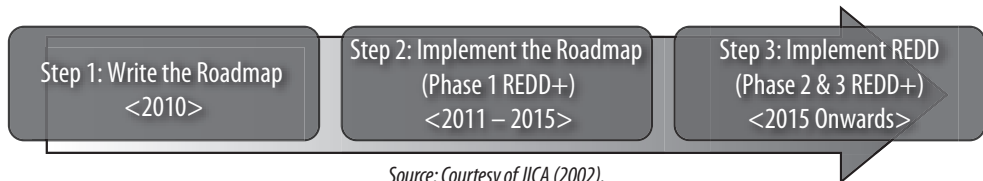
- Consideration of possible REDD+ strategies and implementation framework (REDD+ Taskforce);
- Gathering information about existing activities (UNDP).

These papers will serve to collect existing relevant knowledge and provide the basis for developing frameworks and strategies for advancing REDD+ in Cambodia.

National consultations on the draft REDD Roadmap were conducted on 20 August and 10 September, 2010. These consultations involved a wide range of stakeholders and were effective in gathering input to the draft Roadmap document. The draft REDD Roadmap document has now been completed and submitted for high level government approval. The REDD Roadmap will establish a strategy and plan to cover the following primary areas:

- Management of national REDD readiness (REDD coordination, responsibilities of relevant ministries);
- Consultation, stakeholder engagement and awareness-raising plans;
- Development and selection of REDD strategies;
- Implementation framework (including benefit-sharing and safeguards);
- Forest reference emission levels;

Figure 2.1 : Steps in the national REDD Task Forces' work process



Source: Courtesy of JICA (2002).

23. Keo, O. 2010. *REDD+ roadmap in Cambodia*. Presentation at the Technical Working Group on Forestry & Environment (TWG F&E). Phnom Penh, 20 May, 2010.

■ National forest monitoring system.²³

2.5 REDD Organisations

The institutional framework for REDD in Cambodia is rapidly evolving as the RGC recognises both the potential benefits to be derived from REDD as well as the need to exercise oversight over implementation. The National REDD Task Force is currently the most notable body to coordinate the development of a REDD Roadmap and eventually REDD implementation. However, the Task Force is an interim mechanism to be

Table 2.2: Proposed new REDD+ Taskforce membership

Government Agency	Function in REDD+
MAFF	General Jurisdiction over Forests, Fisheries and Agriculture
Forestry Administration	Regulation of Permanent Forest Estate, including: tree planting, community forestry, protection forests, national forest cover monitoring, national forest carbon stock assessment and regulating forest carbon trades. Focal point for United Nations Forum on Forests (UNFF), United Nations Convention to Combat Desertification (UNCCD) and Convention on International Trade in Endangered Species (CITES).
Fisheries Administration	Management of Flooded Forests & Mangroves inside the fishery domain
Technical Secretariat for Economic Land Concessions	Regulation of Economic Land Concessions for industrial agriculture
Ministry of Environment	Protected Areas, International Environmental Treaties, Reviewing Environmental Impact Assessments, UNFCCC focal point & CDM Interim Designated National Authority, Convention on Biological Diversity Focal Point
General Department of Administration for Nature Conservation and Protection	Management of Protected Areas and Community Protected Areas Climate Change policy coordination: Secretariat of NCCC, UNFCCC reporting & GHG Inventories, Cooperating in development of climate change strategies and carbon credit policy, Coordination of CDM and carbon credit projects Convention on Biological Diversity
Ministry of Economics and Finance	Management of State Properties, including sales, transfers, leases, concessions etc. Management of State Revenue, including co-chair of trust funds
Ministry of Land Management Urban Planning & Construction (MLMUPC)	Management of Cadastral Administration of State Immovable Properties Issue title/ownership certificates to all immovable properties Registration of collective title for lands of indigenous communities Mapping and Land-use planning
Ministry of Interior	National Committee for the Management of Decentralisation and Deconcentration (NCDD) & Subnational administration (including commune development plans & Commune/Sangkat fund)
Ministry of Rural Development	Indigenous Peoples policy

Source: Cambodia REDD+ Roadmap, 2011.

used while the Roadmap is developed, and does not yet include members from the range of ministries with relevance to REDD. Because different ministries have different jurisdictions or roles with regards to forest management, there will need to be strong coordination and division of responsibilities. The National REDD Task Force is currently proposing delegation of national level functions, such as reporting to the UNFCCC and developing national carbon accounting rules, to a national level coordination body. Under this proposal, lower level implementation would be managed by the appropriate line ministry. Table 2.2 shows the proposed new REDD+ Taskforce membership. Under the new structure, the Task Force will have a Secretariat as well as an Advisory Group.

A National Climate Change Committee (NCCC) was formed to prepare, coordinate and monitor the implementation of the Government's policies, regulations and programmes related to climate change. Once the REDD mechanism is formalised under the UNFCCC, the NCCC could play a role in the coordination and reporting of national level REDD activities, though currently it is understood that the REDD Task Force will continue to play a leading role.

The MoE houses the secretariat of the NCCC and is also the official Designated National Authority under the UNFCCC; however, to date the FA has played the most active role in development of REDD policy and implementation. The FA co-chairs the Technical Working Group on Forestry & Environment (TWG F&E) along with a development partner representative (currently Danish International

Development Agency - Danida). Hence, the TWG F&E serves as a forum for disseminating information on REDD and coordinating support to the sector. According to the National REDD Roadmap other technical working groups may also become involved for appropriate sectors.

Under the leadership of both the former Director General H.E. Ty Sokhun and his successor H.E. Chheng Kimsun, the FA has engaged in REDD policy dialogues, prepared Cambodia for membership in the FCPF and UN-REDD, and endorsed and engaged in REDD demonstration projects. Though there is no REDD office or department per se within the FA, a Working Group has been set up to coordinate activities. Under Sub Decree 188 (2008), the FA is specifically charged with conducting assessments to "determine the storage amount of national forest carbon and manage the forest carbon trading and Cambodian forest services to increase inputs for the effective operation and development of forest."²⁴

There are a wide range of civil society organisations engaged with climate change and REDD policy dialogue, with several also embarking on REDD demonstration projects. A National Climate Change Network was formed in 2009 and has approximately 43 institutional members and six observers.²⁵ This group meets regularly and coordinates a civil society position on climate change issues, including REDD. There is also an informal REDD Contact Group attended primarily by international NGOs such as the Wildlife Conservation Society, Pact, Conservation International, Fauna and Flora International (FFI), Wildlife Alliance, and Organisation National des Forests (ONF). This

24. Sub Decree 188, Article 4.

25. Membership as of June 2010.

International Conference on Managing Forest Resources for Multiple Ecosystem Services under Robust and Fragile Environments,

26. Phnom Penh, 9-10 August 2010.

3 National Forest Carbon Accounting and Monitoring, Reporting and Verification (MRV) Systems

Current international negotiations indicate that success in sequestering carbon and avoiding emissions will eventually be measured primarily at the national level, in order to avoid issues of leakage in a sub-national project-based approach. While pursuing a number of REDD demonstration projects for submission to the voluntary market, the RGC is simultaneously taking steps towards establishing a national REDD MRV framework with the vision of eventually “nesting” these projects within a national framework. National MRV systems require a substantial investment in capacity development and management, since data must be collected regularly for the whole country, analysed by technical experts, efficiently compiled and effectively disseminated.

In Cambodia, the first efforts to develop a national carbon accounting system were initiated by CCI, which sponsored six Cambodian government officials to attend a five-day workshop hosted by AusAID/ Department of Climate Change in Canberra in September 2009.

More recently, efforts to establish a MRV system for Cambodia have gotten underway. Under the emerging formal UNFCCC REDD+ framework, participating countries will be required to establish a system for monitoring, reporting and verifying emissions reductions. These systems should include national greenhouse gas accounting, forest cover change assessments, a national forest inventory, carbon stock change assessments, establishment of a national carbon registry, development of standard reporting procedures, and independent third party verification.²⁷ The baseline scenario by which reductions in emissions from deforestation and degradation are measured is referred to as the Reference Emissions Level (REL). The precise modality for establishing the REL is still uncertain and while it is likely to be based on historical data, there will be adjustments for national circumstances, which are not yet fully defined.²⁸ The Cambodia REDD+ Taskforce is determined to track international MRV policy development in order to ensure that the development of Cambodia’s REL will be in line with international standards.

27. Cambodia UN National Programme.

28. Cambodia UN National Programme.

3.1 Current Information on Forest Carbon Stocks and Emissions

3.1.1 Forest Definition

A country's definition of the forest is an important criterion in measuring forest carbon stocks, since it defines which land areas are recognised as forests either historically or at the current time. In January 2007, the RGC defined the forest as follows:

- Tree cover: the area with the forest cover of 10 per cent and above
- Minimum land areas: 0.5 ha and above
- Tree height: 5m and above

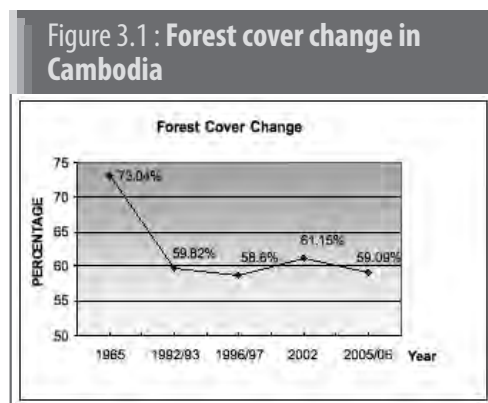
Under the Cambodia REDD+ Roadmap, this definition will be reviewed and revised according to emerging international policies and standards. The REDD Preparation Proposal (R-PP) submitted in January 2011 recommends revising the minimum crown cover to 20 per cent, since the existing 10 per cent is difficult to detect using available remote-sensing imagery, while keeping the other thresholds the same.²⁹

3.1.2 Land Cover and Forest Carbon Stocks

Cambodia is considered to be a country with high forest cover and a high rate of deforestation, as shown in Figure 3.1, which depicts forest cover change over the last several decades. Cambodia is aiming for a least a Tier 2 level³⁰ of data for its estimate of historic emissions/removal. Existing data includes land cover maps for 1989, 1996/7, 2002, and 2006; however, some of the maps cannot be compared due to different techniques used, including the use

of varying land use types and nomenclature. The reference time period has not yet been finalised, but it is likely to be 2000/2002 to 2010/2012.

Table 3.1, prepared by the United Nations Environment Programme's World Conservation Monitoring Centre, provides approximate estimates of the forest carbon stocks under each management agent, based on Cambodia data and default values for under-sampled forest types. The assessment included aboveground and belowground biomass but not soil carbon. This analysis helps to give a sense of the potential scale of carbon stock management responsibility among relevant government agencies.



Source: FA (June 2008).

29. RGC. 10 January 2011. *Cambodia Readiness Preparation Proposal*.

30. The estimation of emission factors of the forest carbon pools can be undertaken at various levels of certainty. The Intergovernmental Panel on Climate Change has termed these levels "Tiers." Tier 2 uses country-specific data (e.g. from forest inventories) on carbon stocks in initial land uses and carbon losses can be apportioned to specific conversion processes, such as burning or harvesting.

Table 3.1 : Forest carbon stocks under each management agent

	Forest Classification	% Forest Carbon stock estimate ¹	Land/Forest Owner	Managing Agent	Regulatory Agent
Permanent Forest Estate	Forestry Concessions (Production Forest, PFR)	30%	State (State Public Land)	Forestry Concession	FA
	Community Forests (Production Forest, PFR)	3% [overlaps with other types]	State (State Public Land)	Forestry Community	FA
	Protection Forests (Permanent Forest Reserve)	14%	State (State Public Land)	FA (usually with support of a donor/NGO)	FA
	Conversion Forests gazetted as Economic Land Concessions	12% [overlaps with other types]	State (State Private Land)	Economic Land Concession holder	MAFF/ELC holder
	Other Forests (could be private forests, or plantations)	19%	State (State Public Land) or Private	Unclear	FA
	Private Forests	? <1%	Individuals (can sell, transfer, etc.)	Individuals	FA
	Indigenous Land Title	? <1%	Registered Indigenous community (cannot sell, transfer, etc.)	Registered Indigenous community	FA
Protected Areas	Protected Areas	26% (all PAs)	State (State Public Land)	GDANCP (sometimes with support of a donor/NGO)	GDANCP/ MoE
	Community Protected Areas		State (State Public Land)	Protected Area Community	GDANCP/ MoE
Flooded forests & Mangroves	Community Fisheries	<1%	State (State Public Land)	Fishery Community	Fisheries Administration (FiA)
	Fishing Lots	<1%	State (State Public Land)	Concession holder	FiA
	Other flooded forest areas	<1%	State (State Public Land)	FiA	FiA

Source: Leng et al. (2010).

3.1.3 Forest Biomass Inventories

A number of demonstration projects and forest management activities have been effective in increasing field experience for

carbon biomass inventory that are necessary to set a project's carbon baseline and ground-truth satellite imagery (Table 3.2).

Table 3.2 : Overview of sample plot establishment

Source	Year	# plots	Forest Types
Permanent Sample Plots (PSPs)	1998	120	n/a ³¹
	2004	104	n/a
	2010	48	n/a
Regrowth Forest	2010	15	n/a
Strategic Forest Management Plan (SFMP)	2002	2000	Unlogged Evergreen
		1760	Logged Evergreen
		1460	Unlogged Mixed
		300	Logged Mixed
		1360	Unlogged Deciduous
		60	Logged Deciduous
Tani et al. 2007	2003-5	9	Semi-evergreen /evergreen
Seima Carbon Study	2008	225	All dryland types
Oddar Meanchey Carbon Study	2008 – 2010	126	All dryland types
Preah Vihear Pilot	2010	72	All dryland types
Seima High Value Forest survey	2004	9	Semi-Evergreen /Evergreen
Cherndar High Value Forest Survey	2004	15	Evergreen

Source: Winrock (August 2010).

The Oddar Meanchey CF REDD project has developed a Standard Operating Procedures (SOP) manual in English and Khmer to guide forest plot sampling. This SOP provides detailed instructions on tree and canopy cover measurements, and has been used for a series of field inventory activities to gather data in 126 permanent forest plots. Field teams involving local communities, FA officials, and soldiers took part in establishing these 50 x 50 meter plots. Experience over two years has allowed the teams to improve the SOP by incorporating lessons learned in the field. For example, plot corner points have been clarified by

burying steel rebar in each corner for later detection with a metal detector and tree tags have been cut from recycled aluminium cans in order to avoid theft of more coveted imported tags.

In Oddar Meanchey, land mines have posed a particular challenge to biomass measurement. As a former Khmer Rouge stronghold and war zone, there are a number of mine hazard areas throughout the province which must be strictly avoided. While these areas are already mapped, it is important for inventory teams to involve former soldiers who have local knowledge

31. Number of species per forest types can be calculated from PSPs and field practice is given per forest type.

of potential danger zones.

In the case of the Seima REDD project, 225 circular plots have been measured using a laser rangefinder or distance measuring equipment (DME). Three teams of 4-5 people did the sampling work, with 1-2 very well-trained Cambodians closely supervising the work with each team. The plots were limited to 20 meters radius, as that is the limit of the DME device in thick forests. The plots were located in clusters of three to reduce travel time to the plots; however, clustering meant that the number of sample plots needed to be increased. Each team completed one cluster of three plots per day. The centre point was marked by a piece of rebar that was buried in the ground. All trees were labelled with two tags, with one serving as a backup. A sharp knife was used to scrape off some bark, and all trees were painted with brush-on paint at chest height (the height of measuring the diameter).

Project biomass data should eventually be centrally stored and analysed in order to increase overall understanding of forest growth rates (annual increment) and carbon stocks throughout the country. The experience gained through demonstration projects will be important in developing methodologies for MRV systems. One important area for further study and assessment is forest degradation. According to the Intergovernmental Panel on Climate

Change (IPCC), degradation is defined as “the direct human-induced long-term loss (persisting for X years or more) of at least Y per cent of forest carbon stocks (and forest values) since time (T) and not qualifying as deforestation”.³² It is estimated that in some forest systems, degradation may account for up to one-quarter of forest carbon loss.³³ The causes of forest degradation include fuelwood and NTFP extraction, selective logging, forest fires, and grazing.³⁴ Developing accurate ways to measure forest degradation, and then to reduce the degradation are critical steps in taking full advantage of the REDD carbon market.³⁵

3.2 Future MRV Development

The National REDD+ Taskforce has laid out a number of priority actions for developing Cambodia's MRV system. These include the following specific objectives:

- Establish an MRV/REL technical team under the National REDD+ Taskforce;
- Conduct a capacity building needs assessment;
- Provide targeted training;
- Establish an MRV Secretariat office;
- Establish national definitions for REDD+ including forest definition, forest classes, reference time period, and carbon pools;
- Develop a national sampling plan for forest carbon inventories;

32. IPCC. 2003. Definitions and methodological options to inventory emissions from direct human-induced degradation of forests and devegetation of other vegetation types.

33. Such was the case for the Oddar Meanchey CF REDD project, which has not yet developed an approved methodology for measuring degradation.

34. Murdiyarso, D. 2008. *Measuring and monitoring forest degradation for REDD: Implications of country circumstances*. Bogor: CIFOR.

35. According to Murdiyarso et al. (2008) “Changes in carbon stocks from forest degradation can be monitored using the ‘stock difference’ and ‘gain-loss’ methods. The choice of method will depend largely on countries’ data availability and capacity.”

- Reassess existing land use change assessments and conduct additional assessments (using Approach 3);³⁶
- Use results from field measurements to estimate emission factors for various land cover changes;
- Construct a national carbon stock lookup table;
- Develop the historical baseline;
- Develop the future reference scenario;
- Support sub national demonstration using a nested approach so that sub national RELs contribute to the national REL.

Source: Cambodia UN REDD National Programme (2011).

Recognising the need for a robust monitoring system based on good science, Cambodia is committed to continue development of its national MRV system. The Japanese Government is pledging significant financial resources to support these efforts, of which more than US \$3 million will support a national forest inventory for the country. It will be important that in-country experts are eventually in charge of managing MRV systems and that they comply with an emerging international policy framework. Because they are the people on the ground, local communities managing forest areas will have an important role to play in MRV as systems and skills develop. Funds for REDD as well as revenues will be directed to sub-national capacity building programs to provide training and coaching to local stakeholders on topics such as forest management planning, monitoring, and reporting. Communities will eventually be responsible for gathering and compiling field data to comply with carbon verification

requirements. Sub-national demonstration projects will be important in trialling MRV pilots so that experience is gained before the roll-out of a national system. Eventually, MRV should be integrated into a more holistic forest information system in both English and Khmer. Experience gained in REDD MRV systems may be useful in developing systems for other payment for environmental services (PES) schemes likely to emerge in the future.

36. Approach 3 is the only approach that tracks forest and other land conversions on an explicit spatial basis, including gross deforestation and gross change in other land cover classes (FCCC/TP/2009/1, Paragraph 12).

4 REDD Financing

A number of donors have started to deliver funding to REDD initiatives in Cambodia; however, the current levels of funding in the sector is not yet sufficient to meet national or sub-national project needs. While Cambodia is a member of the FCPF and UN-REDD (observer status), it was not among the first 20 countries selected by the FCPF for support in the development of a national REDD strategy, nor was it among the first nine countries identified by UN-REDD for REDD support. However, based on the high level of interest shown by the RGC and in-country stakeholders, UNDP and FAO decided to support an initial REDD+ planning process which led to the development of the Cambodia REDD+ Roadmap, which is Cambodia's Readiness-Preparation Proposal (R-PP) for the FCPF. As a consequence, the UN-REDD Programme decided to allocate US \$3.0 million to support Cambodia's REDD Readiness process, co-financed by US \$950,000 from UNDP and US \$450,000 from FAO, and subsequently the World Bank FCPF agreed to allocate a further US \$3.6 million. The Cambodia UN REDD National Programme was approved by the UN-REDD Policy Board on 5 November

2010, and Cambodia submitted its R-PP to the World Bank on 10 January 2011.³⁷

It appears that global funding for REDD readiness is not evenly distributed. Further, according to a recent PriceWaterhouseCoopers report on REDD financing, "Interviewees commented that international donors had moved away from direct project involvement due to the level of risk and are of the opinion that REDD+ should be market driven. Development assistance related to REDD+ is currently channelled to building national and local capacity as well as community forestry efforts."³⁸ There is a chicken and egg syndrome here. Without sufficient funds from either the public or private sector, it is difficult to demonstrate "proof of concept" and thereby reduce the perceived risk in REDD investment. Donors can play a pivotal role in initial investment in the sector to build experience and confidence through the voluntary markets with the goal of easing the transition to private sector financing under a REDD compliance market.

To date, donors who have funded REDD

37. RGC. 10 January 2011.

38. PriceWaterhouseCoopers, LLP. 2010. *Cambodia, REDD+ funding frameworks, barriers to funding, future REDD+ activity and next steps for achieving REDD+ readiness.*

policy development, demonstration projects or capacity building in Cambodia include both bilateral and multi-lateral donors, as well as foundations and private sector companies. For example, UNDP, Asian Development Bank (ADB), Danida, UK Department for International Development (DfID), New Zealand Agency for International Development (NZAID), the European Union, the John D. and Catherine T. MacArthur Foundation, the Blue Moon Foundation, and the Rockefeller Foundation are among donors to the sector. It appears that funds for adaptation to climate change have been substantial, while those for mitigation are proportionately smaller. Both the Cambodia Climate Change Alliance, a multi-donor Trust Fund, and the World Bank's Pilot Program for Climate Resilience (PPCR) are concentrating on adaptation. However, new funds for REDD+ implementation from UN-REDD and FCPF are in the pipeline.

The recent interest of the private sector in investing in REDD indicates the business potential of the carbon sector. The carbon market is growing exponentially from year to year, and the price of carbon credits is recovering from earlier losses during the global economic recession.³⁹ In the short term, local businesses in Cambodia have little incentive to invest in carbon credits, but larger international corporations with branch offices in-country, such as some of the oil and mining conglomerates, could become interested in purchasing carbon credits on the voluntary market to boost their public image, particularly as the

Cambodian population becomes more aware of climate change issues. There are also indications that individual businessmen and women are recognising the market potential of carbon credit investments.⁴⁰

An interesting example of private sector financing for REDD start-up is found in the partnership between the Macquarie Group, an international provider of banking, financial and investment services headquartered in Sydney Australia, and Fauna and Flora International (FFI). Together they have developed a taskforce to invest in six REDD projects across the globe, with Cambodia under consideration for one of the initial investments. The Macquarie Group would provide capital and financial services for the project and ensure compliance with market standards, as well as sell the credits internationally. According to Macquarie's website, "Our approach is to view forests as infrastructure assets." While specific project agreements are yet to be signed between Macquarie, FFI, and the RGC, the substantial investment in this task force indicates growing private sector interest in REDD financing for Cambodia.

Demand for carbon credits is likely to outstrip supply as the market continues to develop, thereby encouraging the private sector to also invest in REDD project start-up. According to Leslie Durschinger, Managing Director of Terra Global Capital (TGC), a private sector firm specialising in REDD carbon development and finance, investors are interested in providing up-front funding for the Oddar Meanchey

39. Hamilton, K., M. Peters-Stanley, and T. Marcelllo. June 2010. *Building bridges: State of the voluntary carbon markets 2010*. *Ecosystem Marketplace & Bloomberg New Energy Finance, June 2010*.

40. A well-known businessman in Cambodia, H.E. Mr. Ing Bun Hoaw, has contacted Pact to enquire about REDD projects and carbon markets.

REDD project in Cambodia, as the project has been developed to be commercially viable by ensuring that the appropriate terms and conditions can be met by the Government and project partners. This is of utmost importance to reducing risk and attracting private investment.

Investors recognise the need for a robust regulatory and governance framework. While the receipt of REDD revenues is performance-based, corruption as an indication of poor governance will be a major concern for the private sector. While Cambodia passed a long-awaited Anti-Corruption Law in March 2010, according to a 2010 report by the anti-graft watchdog, Transparency International, Cambodia still has a lot of work to do to improve its current ranking on the corruption perception index. Greater openness and more public scrutiny will be essential to improve investor confidence in REDD. Investors may also have limited interest due to a perception that the sector is government-controlled and therefore bureaucratic and unwieldy.

Cambodia's National Forestry Programme document states, "While carbon credit sale is one of the income sources, i.e. up to 20 per cent of some of the sub-programmes over the next 20 years, it is not regarded as being a 'silver bullet' to save the Cambodian forests. The finance of the sector still needs to be primarily supported by more traditional but sustainable forest management as the main mean."⁴¹ Whether from the public or the private sector, successful implementation of REDD in Cambodia will require significant, sustained and well-coordinated financing. However, it

is important to keep expectations for REDD financing in perspective.

41. RGC. 2010. p.110.

5 Payment Distribution

Effective distribution of payments from REDD should adhere to principles of transparency, equity and accountability while providing necessary incentives for protection and enhancement of forest carbon stocks. If payment schemes do not efficiently and adequately reward protection efforts, REDD will be in jeopardy.⁴²

Since the compliance market for REDD is still under negotiation among UN member countries, the distribution of payments earned from REDD schemes is difficult to fully define at the national level. Planning for payment distribution for projects under the voluntary carbon market and experience with PES provide some guides as to how future REDD revenues might be channelled. At the time of writing, no forest carbon revenues have yet been earned in Cambodia, however, there are a number of anticipated challenges for the time when significant revenues do arrive. First, there is a need to coordinate decision-making among many different line agencies, each with different interests and priorities. Second, the scale of potential revenues is as yet undefined, depending on a fluctuating market as well as

Cambodia's ability to reduce deforestation. Third, there is limited experience⁴³ and capacity with payment delivery mechanisms in the country, particularly those which can effectively deliver payments to the local level. Finally, laws and administrative practices with regards to transparent and accountable fiscal management are still under development. In the forestry sector, there is now an independent audit conducted on funds delivered through the Technical Working Group, but the annual operating budget is not disclosed and there is no independent external audit of the overall accounts.

However, in the case of the first Cambodian REDD demonstration project in Oddar Meanchey, the Council of Ministers issued a Government Decision⁴⁴ which outlines three main priorities for division of benefits:

- Improve forest quality
- Provide maximum benefits to local communities which participate in the project activities
- Study the potential area for new REDD projects in Cambodia

42. Mongabay.com. 22 July 2010. 'Scientists sound warning on forest carbon payment scheme', http://news.mongabay.com/2010/0722-redd_atbc.html last accessed 11 November 2010

43. Several large donor projects (such as USAID's Local Administration and Reform Program) have delivered funds for development projects to the commune level, encountering a number of challenges but also making headway in developing commune capacity to manage funds.

44. RGC. May 2008. Government Decision No. 699.

In the case of this project, the FA also agreed that at least 50 per cent of the net income (after project expenses) will flow to participating communities. The FA was designated as the Seller of carbon credits, and the Technical Working Group on Forestry and Environment was nominated to channel payments during the first five years of the project (Figure 5.1). However, it is not clear to what extent the payment system for the Oddar Meanchey project sets a precedent for other REDD projects in the country. The MoE is usually absent from the Technical Working Group, so it is unlikely that this mechanism would be acceptable for REDD projects in protected areas.

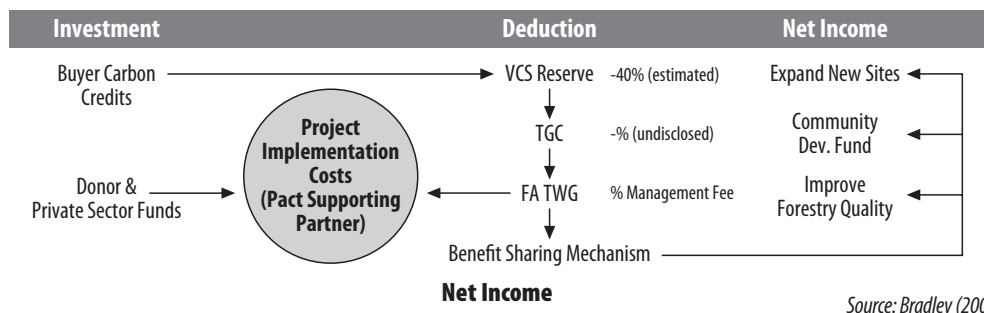
While REDD implementation is currently limited to demonstration projects for the voluntary market, payment distribution mechanisms may be more flexible, but as a national REDD strategy is adopted, it will be necessary to work out fiscal management mechanisms that consider taxation of revenues, conditional earmarking, and accountability. Under a market-based approach, the purchasers of Cambodia's carbon credits may influence how funds are managed. Under voluntary market transactions, company investors want to see the co-benefits delivered to local communities

to enhance the "story" behind a project for marketing purposes.⁴⁵ To be effective, communities will need support to develop financial management capacity according to principles of transparency and accountability.

A number of actors in the sector, including the Wildlife Conservation Society (WCS) and Conservation International, have expressed interest in establishing a trust fund to manage REDD revenues. However, it is important to note that there are currently no conservation trust funds operating in Cambodia. An unclear legal framework, perceptions of risk, weak institutions, difficulties to raise funds, and governance and transparency issues are some of the reasons offered to explain this absence. While an off-shore trust fund remains an option, according to conversations with H.E. Ty Sokhun, the former Director General of the Forestry Administration, the RGC prefers to manage Cambodia's REDD revenues in-country as a matter of national sovereignty.

The arrival of the first REDD revenues, expected in 2011, will probably accelerate the clarification of payment distribution. It will be the job of the National REDD Task Force to elaborate on the payment distribution system for REDD revenues.

Figure 5.1 : Proposed revenue flows – Oddar Meanchey Carbon Project



Source: Bradley (2009).

45. Verles, M. 2010. *Getting the most from the carbon market – do's and don'ts of carbon credit transactions*. Green Drinks.

6 Demonstration Activities

In order to gain experience in REDD implementation on the ground and to see if the REDD mechanism can be effective in providing sufficient incentives for forest protection, Cambodia has embarked on a number of REDD pilot projects. The two most notable examples are the Oddar Meanchey Community Forestry (CF) REDD project and the Seima Protection Forest REDD project in Mondulakiri province. These are the first two projects initiated in the country, and they have made significant progress towards selling forest carbon credits in the voluntary market. This section provides an overview of these two projects with some of the lessons learned, as well as a brief summary of other initiatives underway.

6.1 Oddar Meanchey CF REDD Project

The Oddar Meanchey CF REDD project was initiated in January 2008 by Community Forestry International and subsequently developed and implemented by Pact, in collaboration with the FA and other partners including TGC, Children's Development Association, Monk's CF Association, and CCI. The project bundles

together 13 community forestry groups located in the northwest province of Oddar Meanchey. Together, these communities manage a total forest area of approximately 68,000 ha, including tracts of evergreen, semi-evergreen, and deciduous forests. The communities in the area are highly committed to protecting the forests upon which their livelihoods depend⁴⁶, and their efforts are key to controlling the drivers of deforestation, including conversion of forest lands to agriculture, fire, fuel wood use, and illegal logging.

Communities are interested in collectively protecting forests under Community Forests (CFs) because this mechanism provides more secure tenure for the resources they depend on and wish to conserve. The relatively recent Community Forestry Sub-Decree (2003) and Community Forestry Guidelines (2006) under the 2002 Forestry Law provide the legal framework for establishing CFs, enabling local communities to secure rights to manage forest areas under 15-year renewable CF agreements. The FA, with review of MAFF, has a mandate to grant 15-year CF agreements for community management of

46. Statement by Ms. Mol Nen, Samaky Community Forestry Chief at the Forest Dialogues conference in Siem Reap, 4-5 November, 2010: "The forest is our life and we will protect it forever regardless of the REDD project". In addition, villagers in all of the CF areas have been volunteering their time to conduct day and night patrols of the forest.

forests in areas of production forests. In the case of the Oddar Meanchey project, these CF agreements also include a guarantee of benefits from carbon, with at least 50 per cent of carbon revenues flowing to local communities in the target area. According to a Council of Ministers' decision endorsing the project, revenues will also flow to "improving forest quality" and "exploring new REDD initiatives."

Slide 6.1 : Forest and grasslands, Oddar Meanchey (©Amelia Merrick)



The Oddar Meanchey CF REDD Project has been instrumental in developing capacity in REDD project development and implementation. A number of SOPs with wider applicability have been developed or are in the process of development, including SOPs for biomass assessment, social assessment, assisted natural regeneration and biodiversity assessment. These useful tools incorporate learning from the field and may be a useful guide for future implementation. The Oddar Meanchey demonstration project also provides an opportunity to better understand the drivers of deforestation and the most appropriate strategies for addressing deforestation

challenges. For instance, in the course of local surveys, it was discovered that an enormous amount of wood is being burned every night, as the smoke protects cattle from mosquitoes. As a result of the survey, netting and other lower impact solutions are being explored.

The Oddar Meanchey CF REDD project is in the final preparation phase prior to marketing. The mosaic methodology for the project has been validated, and the project's dual certification by both the Voluntary Carbon Standard and Climate Community Biodiversity Alliance is expected shortly. Within the coming months, the Forestry Administration will be considering the terms of a purchase agreement in preparation for negotiation with potential buyers. According to the project's financial model, approximately US \$40 million may be generated over the project's 30-year time span.

REDD has the possibility to be implemented in many forest contexts. If communities play a leading role in forest management and have access to secure tenure, experience shows that trends in deforestation can be reversed.⁴⁷ Some 85 per cent of Cambodians live in rural areas and depend on forest resources, ranging from wood fuel for cooking to wild honey, rattan, medicinal plants and resin. While forest products are plentiful, rural communities generally live at the subsistence level due to low agricultural yields and poor access to markets and social services such as education, health and credit.⁴⁸ A CF approach to REDD aims to provide a nexus that brings villagers together to find ways to utilise their social capital and secure REDD revenues to

47. Hatcher, J. 2009. *Securing tenure rights and Reduced Emissions from Deforestation and Degradation: Costs and lessons learned*. Social Development Working Papers No. 120. Rights and Resources Initiative.

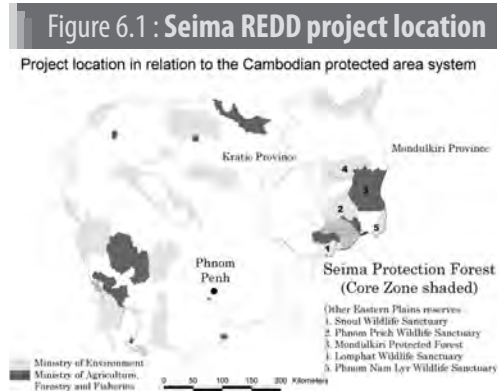
48. http://www.ntfp.org/ntfpadmin/publications-pdf/Final_Cambodia_NTFP_Report.pdf last accessed 11 November 2010

protect forest resources, while also solving some of the livelihood challenges they face.⁴⁹

6.2 Seima Protection Forest REDD Project

The Seima Protection Forest REDD project was initiated in July 2008. The FA is the project proponent, working in collaboration with the WCS. The project builds on an existing forest and biodiversity conservation project in the Seima Protected Forest (SPF) in Mondulkiri and Kratie Provinces that began in 2002. In August 2009, the site was declared a Protected Forest because of its globally important biodiversity values and high socio-economic importance. The area contains 23 different species of carnivore, including seven cat species, two bear species, and two species of wild canine.⁵⁰ The world's largest known population of Yellow-cheeked Crested Gibbon (>2,500) and Black-shanked Douc Langur (>42,000) are also found here.⁵¹ With a view to protecting these globally important biodiversity assets, the Seima Protection Forest REDD Project was initiated to "ensure long term support for reserve operating costs and financial incentives for local communities and local authorities participating in conservation."⁵² A core area of 187,000 ha has been designated as the REDD project area, and project documents are now being developed for submission to the Voluntary Carbon Standard and Climate Community Biodiversity Alliance. The Frontier deforestation methodology, developed by the

Sustainable Amazon Foundation (FAS), is being used for developing the project.



As the project progresses, it provides learning and insight on REDD project development. According to WCS's Deputy Director Tom Evans,

To date, Seima has increased the capacities of some key government staff working with us on carbon inventory, GIS analysis aspects and incorporation of carbon protection measures into strategic and annual plans for the reserve, and it has produced lessons on the effectiveness of various survey and analytical methods in a Cambodia context. It has brought practical experience of weighing up REDD options versus other proposed land uses at senior levels within MAFF. As it proceeds a little further it will provide a wide range of lessons on

49. For more information: [http://www.iges.or.jp/en/fo/pdf/activity_201003/Cambodia/2_\(E\)3-OM_REDD_for_RECOFTC_Training.pdf](http://www.iges.or.jp/en/fo/pdf/activity_201003/Cambodia/2_(E)3-OM_REDD_for_RECOFTC_Training.pdf), http://www.pactcambodia.org/Publications/CFP/OMC_Case_Study.pdf, CCBA: http://www.climate-standards.org/projects/files/cambodia/CCB_PDD_Oddar_Meanchey_NORMAL_RES.pdf

50. T. Evans. 12 Nov. 2010, personal communication; Wildlife Conservation Society. October 2009. *Best of the wild: Wildlife Conservation Society and the Seima Protection Forest*. <http://www.wcs.org/about-us/~/-/media/Files/prospectuses/seimaProspectus.pdf> last accessed 7 February 2011

51. T. Evans. 12 Nov. 2010, personal communication.

52. Ibid.

Project Design Document content and the process of consultations. It is going to be especially important for developing systems for benefit-sharing in the context of indigenous communities and indigenous land.⁵³

The project area is inhabited by approximately 10,000 people, the majority of them ethnic Bunong villagers, who returned to their traditional lands in the area since the ceasing of civil conflicts in the early 1990s. The Seima Project works closely with these forest-dependent communities and is supporting a process of communal land titling to improve their tenure security. The FA already has a good deal of experience in forest law enforcement at the site. Even though threats to the forest, such as clearance for agriculture and mining concessions, continue to grow, it will be important to show additionality in the project actions in order to distinguish between ongoing protection efforts and new strategies and improved support as a result of REDD resources.

The Oddar Meanchey CF REDD project and the Seima Project are complementary in a number of ways. While the Oddar Meanchey project pioneers REDD under a community forestry framework in production forest areas, the Seima Project explores REDD under distinct legal frameworks for Protection Forests and communal lands. Both projects involve full participation of the Forestry Administration and recognise the importance of involving local communities in forest protection. The two projects have collaborated in sharing information and field experience in project development for

mutual benefit, and both make a positive contribution to the understanding of REDD project development overall.

6.3 Other Initiatives

This section provides an overview of the range of REDD-related activities currently being pursued by a number of other international NGOs and organisations.

Birdlife International

BirdLife International has identified two potential sites for REDD demonstration projects: the Western Siem Pang Important Bird Area in Stung Treng Province (>150,000 ha) and Phnom Tbeng forest landscape in three districts of Preah Vihear Province (95,038 ha). In 2009, BirdLife and the Forestry Administration conducted a feasibility study for a REDD project in the Western Siem Pang area. According to initial estimates, the site's forests sequester approximately 25,545,000 MtCO₂, but these forests are susceptible to conversion by concession companies and local communities. REDD is seen as the best option to prevent conversion. BirdLife is planning further work on the pilot survey, development of a baseline biodiversity report to satisfy the Climate, Community and Biodiversity Alliance (CCBA) standards, local level consultations on REDD, and study tours for local government officials to the REDD pilot site⁵⁴. To support REDD capacity building efforts, BirdLife is planning to organise a study tour for key government officials to a 100,000 ha forest restoration concession area in Sumatra, Indonesia.

Clinton Climate Initiative (CCI)

The William J. Clinton Foundation launched

53. T. Evans, 3 June 2010, personal communication.

54. V. Bou, 21 August 2010, personal communication.

the Clinton Climate Initiative (CCI) with the aim of both creating and advancing solutions to the core issues driving climate change. The FA and the William J. Clinton Foundation's Climate Initiative signed a Memorandum of Understanding for work on forest carbon on 12 September 2008. Since then, CCI has provided financial and operational support to the Oddar Meanchey CF REDD project. In particular, CCI is providing financial support for the dual validation (by both the Voluntary Carbon Standard and the Climate Community Biodiversity Alliance) of the project.

In addition, CCI has initiated a REDD+ demonstration project using the same "bundled CF" methodology as the Siem Reap province. In this case, CCI provides direct financial and technical support to the FA to develop a REDD project involving 37 community forestry sites. Currently, 27 of these sites have been legalised and a further ten are to be signed in the next few months. To support the project, CCI has provided fully-licensed geographic information system (GIS) software for use by the Cantonment office and has also organised a training workshop in January 2010 in collaboration with Google, Inc. to introduce an android mobile phone and data kit to support field monitoring.

Conservation International (CI)

The Conservation International Cambodia Programme has conducted a detailed feasibility study of the central Cambodian lowland forests, also known as Prey Long. This study includes predicted deforestation maps for 2014 and 2019, based on

deforestation rates since 2000. The study area covers approximately 500,000 ha of legally unprotected forest estate to the west of the Mekong River in central Cambodia, and consists of a matrix of primarily lowland evergreen forest, with some lowland swamp forest and semi-evergreen forest.⁵⁵

Groupe Energies Renouvelables, Environnement et Solidarités (GERES)

GERES Cambodia offers "consultancy services to companies and organisations in the fields of biomass management, reducing greenhouse gas emissions and carbon and energy audits, as well as research projects and studies on social and environmental topics. Since 2008, GERES Cambodia has been undertaking an important development programme on biomass energy with the aim of validating sustainable models of energy supply and consumption."⁵⁶

In terms of mitigation of GHG, directly or indirectly released through deforestation or forest degradation, this development programme is promoting an active landscape level approach. The programme activities are mainly situated on frontiers of deforestation and areas of high population pressure, typically areas with increased unsustainable resource use and demand.

Based on experiences on carbon credits sold through the CDM and voluntary carbon markets, GERES established Nexus as a non-profit alliance of pro-poor carbon project developers who provide assistance for projects entering the carbon market. Nexus, a peer to peer platform of services, is

55. D. Emmett, 28 August 2010, personal communication.

56. <http://www.reliefweb.int/rw/res.nsf/db900sid/OCHA-832M9H?OpenDocument>, last accessed 08 February 2011

providing access to resources, transparency and capacity for entering the market at scale.

The Centre for Clean Air Policy (CCAP)

The Centre for Clean Air Policy (CCAP) in Washington, DC recently completed the first phase of its project to evaluate options to reduce deforestation and associated GHG emissions in Cambodia under a post-2012 international climate change framework. In consultation with the MoE and a range of Cambodian stakeholders, the CCAP team conducted a case study to estimate historical carbon stocks and future deforestation and emission trends for the coastal lowlands of Koh Kong province. The researchers estimated the opportunity costs of agriculture and carbon benefits for the study area, developed policy implementation blueprints for utilising Protected Areas and enhancement of carbon stocks to achieve national REDD goals, and evaluated the broader implications of the Cambodia study to inform the international REDD policy process.

The Centre for People and Forests (RECOFTC)

RECOFTC has provided a variety of support for REDD capacity building and policy development in Cambodia. These interventions have included the *REDD+ Partnerships: National Workshop for Government & Civil Society in Cambodia* in collaboration with IGES (Feb 2010) as well as the preparation of several case studies:

- Action Learning on Community Carbon Accounting for REDD+ in Seima Protection Forest in Mondulakiri-Kratie, in collaboration with IGES-WCS for nine months starting (Sept 2010 - May 2011).

- Development of in-country case study to complement the draft RECOFTC Training Manual on REDD Capacity Building for Grassroots Forest Sector Stakeholders (Aug-Sept 2010) supported by IGES.

In addition, RECOFTC has supported awareness raising regarding REDD including the provision of REDD information dissemination materials in Khmer (i.e. REDD 101-103, Call for Action First Regional Forum for People and Forests: Carbon Financing and Community Forestry-Aug 200, etc.). A new project supported by the European Commission will further these efforts, while a four-year regional project entitled "Forest Information Generation and Ownership by Local People (ForInfo) Project" is currently under consideration by Finland's Office of Foreign Affairs.

RECOFTC is a member of the National REDD+ Taskforce as well as the NGO REDD Contact Group.

Organisation National des Forêts-International (ONFI) (under AFD support)

Between June 2008 and June 2009, ONFI, with the support of the French Development Agency (AFD), provided one year of technical support to the Forestry Administration with an aim to elaborate tools (CDM land eligibility analysis, multi-temporal land use analysis for the determination of baseline regarding REDD mechanism) and documents to guide national decisions concerning the use of the CDM and the REDD mechanism. Training on CDM and REDD modalities, procedures, and stakes were provided to the Forestry Administration. The project also supported

a Regional Workshop on Forest and Climate Change organised in Phnom Penh in May 2009 to examine policy implementation options for REDD and consider areas of regional cooperation among ASEAN member states. The workshop was organised by FC, assisted by ONFI, and supported by AFD.

Wildlife Alliance (with ONFI)

Wildlife Alliance's Southern Cardamoms REDD project located in southwest Cambodia, covers an area of approximately 197,062 ha in Koh Kong Province. Wildlife Alliance has had an established presence since 2002 in the Southern Cardamoms, one of the biggest intact block of natural forest in mainland south-east Asia. The richness of vegetal biodiversity is closely related to constant high relative humidity (80 per cent), abundant rainfall (90 days with 2,922-4,000mm per year) and warm temperature (32°C).⁵⁷ The project area is situated in elevated highland and shares affinity with vegetal biodiversity of the Indo-Malayan region. In a context of increasing demographic pressures, infrastructural extension and economical development projects in the region, the major deforestation drivers include encroachment on the forest for small-scale agriculture and for large-scale economic land concessions. Extraction of forest resources is a degradation driver.

With guidance from ONFI, who is providing the technical assistance and is engaged in writing the project design document (PDD), the biomass inventory has just been completed and data entry is set to begin. Project proponents won't be developing a

new methodology but intend to use one of the REDD methodologies currently under the validation process with the Voluntary Carbon Standard (VCS). Due to the increasing threats facing the Southern Cardamoms, a modelling approach has been chosen to establish the baseline scenario, as available in the BioCarbon Fund mosaic deforestation methodology, thus a methodological change was required to ensure the use of a modelling approach for baseline establishment. The methodological change had cascading effects, requiring modification and adjustment on different aspects of the REDD project. PDDs for both the CCBA and the VCS will be written and are expected to be completed in late 2010.

World Conservation Union (IUCN)

In February 2010, IUCN facilitated a workshop in Phnom Penh on REDD benefit distribution systems, drawing from experience in leading a dialogue on the same topic in Vietnam. The workshop involved government representatives, NGOs, and donor agencies. A forthcoming report analyses a range of considerations in this regard and proposes some possible benefit-distribution structures. IUCN aims to promote research, workshops and outreach in Laos and Cambodia to accelerate learning between neighbouring countries.

Worldwide Fund for Nature (WWF)

A feasibility study will be conducted for the Eastern Plains as part of a sustainable financing strategy. WWF is currently seeking funding in order to start implementing REDD/REDD+ in the Eastern Plains, but as yet there are no activities on the ground.

57. L. Perlman, 23 August 2010, personal communication.

7 Capacity Building Needs

Due to its turbulent history, Cambodia's human and technical capacity is still limited, and its educational system is weak, with only 25 per cent of children studying beyond primary school.⁵⁸ Government staff salaries are low, forcing many civil servants to work outside of their regular jobs in order to earn a living. Efforts are being made to reform the civil service and improve education, but there is still a lack of human resources capacity, particularly when it comes to implementing a complex REDD strategy. At the local level, villagers lack knowledge on basic concepts such as the composition of the air we breathe, the definition of carbon, threats to climate, and the role of the forests in climate protection, while even among educated Cambodians there is a need to improve awareness of climate change issues and upgrade related technical skills. Nevertheless, there is a growing group of Cambodians who are motivated to access training opportunities and increase their skills and knowledge around REDD. The following assessment of capacity building needs is subdivided into perceived needs at the national level and sub-national level in order to distinguish between skills and knowledge needed for REDD management and coordination versus on-the-ground

REDD implementation. At both levels, a gender-balanced approach is strongly recommended.

At the *national level*, a cadre of knowledgeable and technically-skilled individuals will be needed to manage the day-to-day requirements of operating a national REDD system. Currently, only a handful of government staff understand the REDD mechanism well. While contracting some services to the private sector or to NGOs is an option, the vision of the RGC is more likely to focus on internal capacity building for its own civil servants. Building national capacity will reduce dependence on international consultants, but there is always the risk that newly trained government employees will leave to work for the private or civil society sector. While building skills, adequate salaries and incentives need to be considered.

Policymakers will need a better overall understanding of the REDD mechanism and the components of a REDD programme. They will need to understand the potential risks and benefits in order to make informed decisions and deal appropriately with the market. With REDD's aim of promoting the permanence of

58. <http://education.stateuniversity.com/pages/225/Cambodia.html> last accessed 7 February 2010

forests, the RGC will be liable under carbon credit purchase agreements for the loss of its carbon stocks, so understanding the legal issues involved is also critical.

GIS and remote sensing departments have already received international donor support, but additional assistance is needed to align with the specific requirements of REDD, such as land classification and carbon stratification. The national MRV system will require planners and project officers with improved skills in forest carbon measurement and modelling, reporting, database management, and emission factor calculation, among others. Skilled programme managers will be needed in order to coordinate REDD efforts across the country and with external actors. Finally, an upgrade of hardware and software systems will be necessary.

Table 8.1 depicts the roles of various government agencies along with some initial ideas on capacity requirements.

At the *sub-national level*, understanding on climate change is very limited. Demonstration projects in Oddar Meanchey and Mondulhiri are gradually building awareness among communities and local authorities, but understanding is still rudimentary. Experience has shown that significant resources will be needed to increase local knowledge of REDD. Training and awareness-raising should utilise existing structures and partners.

In the planning and preparation stage, some of the most salient needs in the provinces are for forest and land use management planning and mapping, development of community forestry, forest inventory, FPIC (free prior informed consent) and biodiversity and social assessment. During implementation, improved systems will be needed for local monitoring, forest law enforcement, fire control, assisted natural regeneration, financial management and alternative livelihoods.

Table 8.1 : Agency roles and capacity building requirements for REDD+

	Expected role	Capacity needed
RGC	<ul style="list-style-type: none"> • REDD+ policies, strategies • Laws and regulations 	<ul style="list-style-type: none"> • Finance • Advisory group • Technical staff
REDD+ Task Force	<ul style="list-style-type: none"> • Implementation for REDD+ activities/ interventions 	<ul style="list-style-type: none"> • Support staff • Finance expert • Training RS/GIS/Field Methods • Updated computing and field equipment, infrastructure, etc.
MoE	<ul style="list-style-type: none"> • Coordinate CC Strategies • Carbon credit policy • Manage CC trust funds • Designated National Authority • UNFCCC focal point • Protected Areas Strategic Management Plan • Coordinate Carbon Projects • Environment Impact Assessment 	<ul style="list-style-type: none"> • REDD+ expert staff • Training Remote Sensing/GIS/Field Methods • Technical support (equipments, infrastructure, etc.)
NCCC	<ul style="list-style-type: none"> • Oversee Climate Change Programmes 	<ul style="list-style-type: none"> • Finance • Technical staff • Computing, Field, Infrastructure
FA ⁵⁹	<ul style="list-style-type: none"> • Responsible for REDD+ • Provide adequate training of trainers to communities on basic inventory skills 	<ul style="list-style-type: none"> • National forest monitoring system • National forest cover analysis • GIS • Forest inventory • Law enforcement • Reforestation
Apsara / Temple Authority	<ul style="list-style-type: none"> • Coordinate activities in forested areas surrounding temples 	n/a
Indigenous People	<ul style="list-style-type: none"> • Coordinate community forest activities • MRV in community forested areas • Guarantee implementation of locally adequate policy 	<ul style="list-style-type: none"> • Knowledge on climate change and REDD

Source: Winrock (August 2010).

59. Additional information for the section on FA and Indigenous People was provided by the REDD Focal Point, Dr. Keo Omaliss.

8 Conclusion

Since COP 13 and the Bali Action Plan, Cambodia has made tremendous progress in developing a national REDD strategy, in building local capacity, and in initiating a number of demonstration projects. Despite limited financial resources, government agencies, development partners, and civil society organisations have come together to design a UN-REDD National Programme document to guide the future implementation strategy. While the learning curve for many stakeholders has been steep, there has been a spirit of cooperation and dialogue, resulting in concrete outputs. Even though the policy and legal framework for REDD is still imprecise, key documents such as the National Forestry Programme and the Government Decision No. 699 indicate a commitment to long-term planning, community benefits, and REDD project expansion. A recent review of R-PPs by the World Resources Institute, rated Cambodia's efforts in the REDD+ process so far as among the most outstanding in the developing world. The report recognised key achievements in meeting governance

criteria, including stakeholder participation, government coordination, transparent and accountable revenue management and benefit sharing, land and forest tenure arrangements, and law enforcement.⁶⁰ The increasing confidence in Cambodia's commitment to REDD+ is also witnessed in new financial commitments from UN-REDD (US \$3 million) and FCPF (US \$3.6 million)⁶¹.

For the past several decades, Cambodia's forests have been degrading and disappearing, but significant forest cover still remains. In the coming years, global opportunities and pressures to either protect or convert forests will present Cambodia with important choices regarding its development path. The opportunity costs of a REDD strategy have not yet been fully explored. Cambodia has demonstrated its commitment in developing a framework for REDD; however, how REDD readiness will translate to the protection of forest carbon and mitigation of climate change remains to be seen.

60. Goers-Williams, L., F. Daviet, C. Davis and S. Lupberger et al. 2010. *Getting ready with forest governance: A review of the World Bank Forest Carbon Partnership Facility Readiness Preparation Proposals and the UN-REDD National Programme Documents*. WRI Working Paper, November 2010. Washington, DC: WRI.

61. Based on conversations with Dr. Keo Omaliss, REDD Focal Point (21 December 2010), and <http://www.un.org.kh/undp/pressroom/stories> (last accessed 21 December 2010).

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