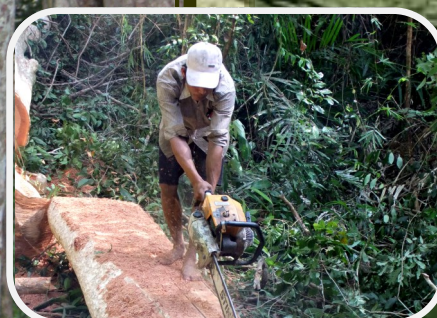


Cambodia REDD+ Readiness - State of Play

June 2013



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Foreword



With the understanding that deforestation contributes to as much as 20 per cent of global anthropogenic greenhouse gas emissions, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) have been attempting to reach agreement on how developing countries can be supported and rewarded for protecting and enhancing the carbon stocks in their standing forests - a concept known as REDD+. For international negotiators to reach agreement on a global REDD+ mechanism presents but one challenge. Where deforestation rates have been persistently high over many years and where forest management policies have largely been ineffective in achieving their objectives, reforming governance structures, regulatory controls and incentive systems to protect forest carbon stocks, including in a manner that is socially acceptable (e.g. acceptable to all major forest stakeholders), will not be easy. The global REDD+ mechanism will also require participating countries to project future forest carbon stock changes under a business-as-usual scenario, to monitor and report actual forest carbon stock changes, and to attribute these changes to drivers. As developing countries mostly have incomplete and inconsistent forest datasets, and as some have never conducted a proper forest inventory, these presents another set of difficult challenges.

The Institute for Global Environmental Strategies (IGES) is monitoring the development of national REDD+ systems in selected key REDD+ countries in the Asia-Pacific region. This work is generally based upon outputs produced through a REDD+ related project funded by the Ministry of Environment, Japan.

This report presents the results of a study on REDD+ readiness in Cambodia, a country with forests of importance to its people and globally. I would like to congratulate the author for succeeding in bringing together this report, which I anticipate will be useful to people working on REDD+ issues from local to international levels.

Hideyuki Mori

IGES President

March 2013

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The author is solely responsible for any omissions and errors.

Acronyms and Abbreviations



CCB	Climate, Community and Biodiversity
CFs	Community Forests
CI	Conservation International
COP	Conference of the Parties
CPAs	Community Protected Areas
DANIDA	Danish International Development Agency
DBH	Diameter at Breast Height
DFID	UK Department for International Development
EIA	Environmental Impact Assessment
ELC	Economic Land Concession
ESIA	Environmental and Social Impact Assessment
FA	Forestry Administration
FAO	Food and Agriculture Organization (of the United Nations)
FCPF	Forest Carbon Partnership Facility
FFI	Fauna and Flora International
FFPRI	Forest and Forest Products Research Institute
FiA	Fisheries Administration
FPIC	free prior informed consent
GDANCP	General Department of Administration for Nature Conservation and Protection
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
ha	hectare
IGES	Institute for Global Environmental Strategies
IPCC	Intergovernmental Panel on Climate Change
JICA	Japan International Cooperation Agency
MAFF	Ministry of Agriculture, Forestry and Fisheries
MDGs	Millennium Development Goals
MEF	Ministry of Economy and Finance
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoE	Ministry of Environment
Mol	Ministry of Interior

MRD	Ministry of Rural Development
MRV	monitoring, reporting and verification
NCCC	National Climate Change Committee
N.D.	not dated
NFI	National Forest Inventory
NFMS	national forest monitoring system
NFP	National Forest Programme
NGOs	non-governmental organization
ONF	Office National des Forêts
PAs	Protected Areas
PRA	participatory rural appraisal
RECOFTC	RECOFTC - The Center for People and Forests
RGC	Royal Government of Cambodia
REDD+	Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
REL	Reference Emissions Level
RL	Reference Level
R-PIN	Readiness Programme Idea Note
R-PP	Readiness Preparation Proposal
RS-GIS	Remote Sensing and Geographic Information Systems
SESA	Strategic Environmental and Social Assessment
tCO ₂	tonnes of carbon dioxide
TWGF&E	Technical Working Groups on Forestry and Environment
UNDP	United Nations Development Programme
UNEP-WCMC	United Nations Environment Programme World Conservation Monitoring Centre
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
VCS	Verified Carbon Standard
WCS	World Conservation Society
WRI	World Resource Institute

Executive Summary



- Cambodia has both a high forest cover and a high deforestation rate, making REDD+ highly relevant as it offers significant opportunities for reducing emissions and delivering financial and environmental benefits to the country. The government recognises these and other advantages of REDD+, such as the support it could provide to meet the 60% national forest cover target, and objectives on biodiversity, poverty alleviation and sustainable forest management. Since COP 13 in Bali, Cambodia has been working on REDD+ readiness, with support from the World Bank's FCPF and the UN-REDD Programme.
- The government has sought to introduce policies to achieve effective and sustainable forest management, but these have struggled to compete with the economic and other underlying drivers of forest loss. Small-scale illegal logging to provide timber for domestic markets has emerged as a major driver of forest loss. Industrial agricultural plantations for cash crops such as oil palm and rubber are also driving forest conversion. Weak governance and institutions, reflected in weak law enforcement and weak sectoral coordination, also underlie the struggles Cambodia is having in achieving its forest policy objectives.
- Key support for REDD+ readiness has been provided by the UN-REDD Programme, the FCPF, and JICA. Cambodia's international partners are collaborating to ensure their support is in line with Cambodia's REDD+ Roadmap. At sub-national levels, several REDD+ demonstration activities, including pilot projects and feasibility studies, are underway. These are largely led by international NGOs and are mostly in forests under FA jurisdiction. Two pilot projects (the Oddar Meanchey REDD+ Project and the Seima Protection Forest REDD Project) have shown significant progress, though are not free of challenges. Being implemented under different legal frameworks, the two projects propose different forest management measures, though both focus on community participation in delivering REDD+ actions.
- The organisational framework for REDD+ management has gradually evolved and now engages various ministries. A REDD+ Taskforce and Taskforce Secretariat were established. To address technical issues associated with REDD+, several Technical Teams are under development. Among the government agencies, the FA is playing the leading role, working closely with the UN-REDD+ Programme, other donors and NGOs. Other ministries are involved in decision-making at higher levels through the REDD+ Taskforce and consultation processes. However, the coordination arrangement for REDD+ is still under development, and the REDD+ Taskforce is yet to function effectively as the main government body for REDD+.
- The development of the Cambodia REDD+ Roadmap was led by the interim REDD+ Taskforce, with support from the UN-REDD Programme and strong engagement of NGOs. The REDD+ Roadmap was developed using the R-PP template, and is recognised as the national plan for how the government wants to move ahead with REDD+ readiness. The government places the development of the REDD+ strategy within the existing forest policy framework and strategies, which include the National Forest Programme 2010-2029, the planned National Protected Area Strategic Management Plan, and the Strategic Planning Framework for Fisheries. The government views REDD+ as providing a source of sustainable finance to support the implementation of these three key management plans, rather than as developing a host of new strategies. The government's REDD+ strategy aims at (1) effective management of Cambodia's forest in accordance with existing policies and strategies, and (2) addressing drivers from outside the forestry sector. In the REDD+ Roadmap,

the government proposes further study to integrate REDD+ into the land-use plans at national and provincial levels.

- Cambodia is still at an early stage in developing its MRV system and forest reference levels. There is a clear need to strengthen technical and institutional capacity, especially on forest inventory and carbon measurement. In addition, when designing the national MRV system, a way must be found to accommodate the different roles and responsibilities of the various government agencies that have jurisdictional authority over forest resources and land use.
- Cambodia is also at an early stage in developing its REDD+ safeguards system in accordance with UNFCCC COP decisions. Given existing land conflicts and the weak position of indigenous groups and local communities in staking their claims to land and resources, the development of the REDD+ safeguard system is a high priority for Cambodia. FPIC processes provide a means to protect their rights and increase local participation in REDD+ decision-making. Creating opportunities for forest-dependent groups to participate meaningfully in REDD+ and recognising their claims to land and forest tenure will increase social acceptance of the REDD+ concept and its potential to protect and enhance forest carbon stocks.

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1. Introduction

Growing concern about climate change has directed attention towards greenhouse gas emissions from deforestation and forest degradation in developing countries, and led to the concept of reducing emissions from deforestation and forest degradation and enhancing carbon stocks in standing forests (REDD+). The underlying idea of REDD+ is to provide financial incentives to protect and increase forest carbon stocks in developing countries, which might otherwise be lost through conversion to other land uses or degraded through unsustainable forest management (Scheyvens and Setyarso, 2010). REDD+ is widely viewed as one of the key mitigation strategies to avoid dangerous climate change.

In the Asia Pacific region, 10 countries are undertaking REDD+ readiness activities. The Royal Kingdom of Cambodia (Cambodia) is one of these. It has been participating in the international REDD+ negotiation process under the United Nations Framework Convention on Climate Change (UNFCCC) since 2007. Cambodia is rich in forest resources and is experiencing high rates of deforestation and forest degradation, meaning that an effective REDD+ strategy could make an important contribution to climate change mitigation and deliver financial and environmental benefits to the country.

This report provides an independent review of the state of REDD+ readiness in Cambodia as of June 2013. It follows up on the IGES report 'Review of Cambodia's REDD Readiness: Progress and Challenges' (Bradley, 2011) and is a part of a regional study on REDD+ funded by the Ministry of Environment of Japan that aims to share information and lessons from REDD+ readiness processes.

In Decisions 4/CP.15 and 1/CP.16, the UNFCCC Conference of the Parties (COP) sets out the basic elements of national REDD+ systems. These are: (i) a national

strategy or action plan aimed at protecting and/or increasing existing forest carbon stocks; (ii) a forest reference emissions level (REL) against which the impacts of REDD+ activities can be measured; (iii) a national forest monitoring system (NFMS) to monitor changes in forest carbon stocks, as part of a monitoring, reporting and verification (MRV) framework for REDD+ (iv); a REDD+ safeguards system which can ensure that REDD+ actions do not cause negative social or environmental impacts; and (v) demonstration activities aimed at generating information and practical experiences for the development of national REDD+ systems (Scheyvens, 2012).

This report is structured to reflect these basic elements. In addition, the report discusses the organisational framework to implement REDD+ in Cambodia and reviews financial and technical support for REDD+ readiness. The report begins with a description of Cambodia's forest resources and forest cover trends, and a review of national forest policy and governance. The information for the report was obtained from a literature review as well as from interviews with REDD+ stakeholders in Cambodia, including state agencies, non-governmental organisations (NGOs), and donor agencies.

2. Forest Resources



2.1. Extent of forest cover

Cambodia has a relatively high forest cover. The Forestry Administration (FA) under the Ministry of Agriculture, Forestry and Fisheries (MAFF) estimates that 57.1% or 10.3 million ha of the total land area is covered with forests (FA, 2011). The majority of Cambodia's forest (96%) is characterised as naturally regenerated forest (not primary forest), while primary forest and planted forest account for 3% and 1%, respectively, of the total forest cover (FAO, 2010b). The most forested areas are found in the south-west, east and north of the country (Fig. 1). Cambodia's forests include evergreen (33.7%), semi-evergreen (12%) and deciduous (43%) forests, in various conditions from closed to disturbed, and mosaic formations (FA, 2011).

Although the contribution of the forestry sector to Cambodia's gross domestic product (GDP) has not been significant¹, the Royal Government of Cambodia (RGC) recognises the importance of forest resources to the socio-economic development of the country, as they provide a

wide range of goods and ecosystem services that are especially critical for the rural population. About 85% of the total population live in rural areas (Broadhead and Izquierdo, 2010), and more than 40% of rural households obtain between 20 to 50% of their livelihoods from forest resources (UN-REDD Programme, 2011).

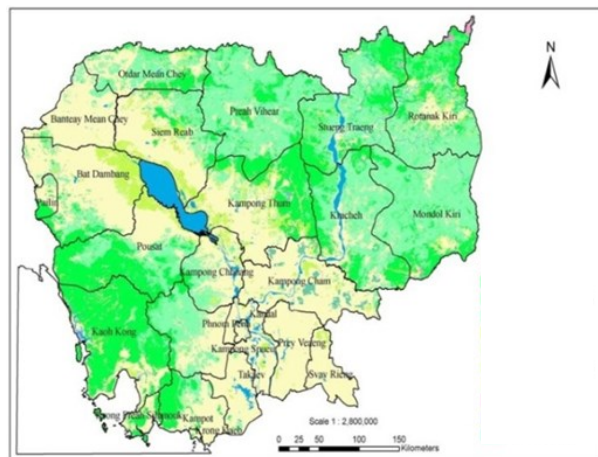


Figure 1: Cambodia forest cover map 2010

Source: Leng (2011).

2.2. Rates of forest cover change

Cambodia has experienced high rates of deforestation and forest degradation since the middle of the 20th century. Forest cover declined dramatically from 73.04% of total land area in 1965 to 59.82% in 1993 and to 57.07% in 2010 (Leng, 2011) (Fig. 2). The government reports that between 1990 and 2010, an estimated average of 142,500 ha or 1.1% of forest cover per year was lost largely due to the expansion of agriculture and forestry plantations (RGC, 2012). As a conse-

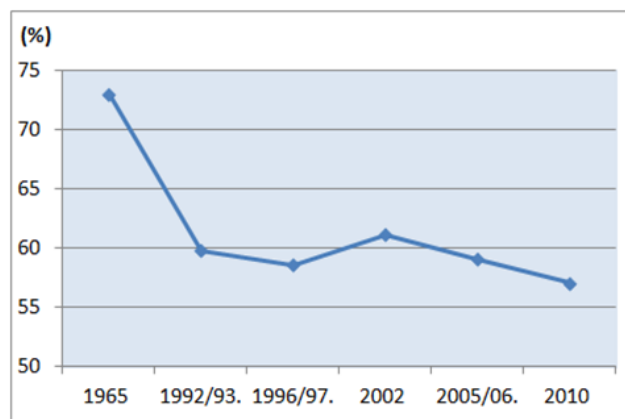


Figure 2: Forest cover change in Cambodia

Source: Leng (2011).

1. In 1999, the forestry sector in Cambodia contributed to only about 6.2% to GDP (Savet and Sokhun, 2003).

quence, Cambodia is viewed as a “high forest cover with high deforestation” country (Griscom et al., 2009; Nguyen et al., 2010).

2.3. Direct causes and underlying drivers of deforestation and forest degradation

Deforestation and forest degradation in Cambodia have been largely driven by economic interests. The forest concession system was introduced in the 1990s, and between 1994 and 1997, approximately seven million ha of forests (70% of the total forest land) were granted to 36 concession holders (UN-REDD Programme, 2011). As these forestry concessions led to uncontrolled logging and considerable deforestation over the country, the government issued a logging moratorium and most of forest concessions were cancelled by 2006.

While the government has sought to introduce an effective and sustainable forest management system to replace the forest concession system, illegal logging on a small-scale to provide timber for domestic markets has emerged as a major problem causing the rapid loss of primary forest. It is reported that up to 90% of total timber production in Cambodia originates from illegal logging (DFID, 2007). Forest fire and unsustainable wood fuel collection are identified as other direct drivers within the forestry sector of deforestation and forest degradation (FCPF, 2011).

Deforestation drivers outside the forestry sector include large-scale agricultural plantations, mining and infrastructure development, and expansion of settlement areas (ibid.). In particular, industrial agricultural plantations for cash crops such as oil palm and rubber have become a major cause of recent forest conversion. About 1.5 million ha (9% of the total land area), most of which had been forested areas (Broadhead and Izquierdo, 2010), were allocated through the Economic Land Concession (ELC) system by 2010 for agro-industrial purposes (The NGO Forum on Cambodia, 2011). ELCs

have led to uncontrolled land grabbing by powerful actors causing land conflicts with customary forest users and posing a serious threat to forests (Stibig et al., 2007).

Cambodia’s Readiness Preparation Proposal (R-PP) identifies a number of underlying drivers of deforestation and forest degradation, both within and beyond the forest sector (Table 1). The drivers have political, economic and social roots, and are often intertwined through complex processes.

Weak governance and institutions, as well as a lack of law enforcement, are seen as key underlying drivers of forest loss (Broadhead and Izquierdo, 2010; Savet and Sokhun, 2003; Yasmi et al., 2010). More specifically, a lack of clearly defined boundaries between different forest types, unclear and unstable forest land tenure, a lack of the government’s capacity to manage and monitor forest areas, incompatible laws and regulations, and weak protection measures are all driving deforestation and forest degradation (Broadhead and Izquierdo, 2010; Nguyen et al., 2010).

Rapid economic development is another underlying driver of forest loss. From 1994 to 2011, Cambodia’s economy grew by 7.7% annually, with the agriculture sector growing 4-5% annually from 2002 to 2010 (RGC, 2012). This economic growth has brought about the expansion of road networks, improving accessibility to remote forests; the expansion of sub-urban areas and agricultural land; and growing domestic demand for wood and other forest products. In addition, foreign investment, increasing food prices and demand for bio-fuels has encouraged the establishment of large-scale agricultural plantations through ELCs (Broadhead and Izquierdo, 2010).

Population growth, internal migration and low agricultural yields have increased pressure on land. Migrants clear the forests for agriculture. Broadhead and Izquierdo (2010) explain that in Cambodia non-managed forest land has been tradi-

tionally treated as open-access and clearing the land has been a common approach to lay claim to it. This social practice often makes it difficult to discuss land tenure and land use planning in sev-

eral regions in Cambodia (FCPF, 2011).

Table 1: Underlying drivers of deforestation and forest degradation in Cambodia

Within the forestry sector	Outside the forestry sector
<ul style="list-style-type: none"> • Lack of demarcation of forest areas • Low institutional capacity and weak policy implementation • Inadequate forest law enforcement • 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 • Lack of sustainable or alternative supply of wood and timber, including for wood energy, to meet demand • 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 for line agencies, local authorities and local communities to support sustainable forest management activities 	<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 ESIA regulations and lack of implementation • Governance <ul style="list-style-type: none"> - Weak land tenure - Land grabbing - Weak enforcement of law - Limited 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 environment roles of forests

Source: FCPF (2011).

3. Forest policy



During the 1990s, Cambodia's forest policy was developed in favour of commercial timber interests through forest concessions, with little attention given to social and environmental sustainability (Amariei, 2004; Hansen and Top, 2006). However, poor governance of the concession system has led to illegal activities and loss of government revenue (Amariei, 2004). In addition, for the most part, sustainable management practices were not implemented under the forest concessions (Savet and Sokhun, 2003). This resulted in forest loss over large parts of the country, the depletion of environmental services, which impacted rural livelihoods, and conflict between concession holders and local communities.

With this failure in production forest management, forestry policy in Cambodia has slowly shifted towards sustainable management and conservation, with a view to delivering multiple benefits (environmental, social, and economic) to a broader range of stakeholders (Ra et al., 2011). Along with this shift, Cambodia's legal and policy framework over forest resources has been reformed and strengthened, which includes an issuance of a moratorium on logging activities since January 2002. The National Policy Statement on Forestry Sector in July 2002 emphasised the policy objectives of forest resource conservation, good governance, socio-economic development and poverty reduction. With these objectives, promotion of community forestry and the creation of protection forests and wildlife conservation areas have become important parts of forest policy. To ensure the sustainable management of forests in the country, the Forestry Administration (FA) was established in 2003 replacing the Department of Forestry and Wildlife, with a mandate to govern the Permanent Forest Estate.

3.1. Regulatory framework

The Government of Cambodia has passed several laws to provide a legal basis for management, conservation and development of forest lands. These include the Land Law (2001), the Forestry Law (2002), the Fisheries Law (2005), the Protected Areas Law (1993, 2008), and the Environmental Protection of Natural Resources Management Law (1996).

The Forestry Law (2002) is the key legal instrument for the forestry sector. It defines forest land classification, management systems, as well as enforcement, fiscal and other regulatory mechanisms (MAFF, 2010b). In addition, the law identifies the roles and responsibilities of the FA, including concession management, community-based forest management, traditional user rights, and wildlife management and forest crimes (*ibid.*).

The Land Law (2001) also provides an important legislative foundation for the forestry sector. The law defines land classification and ownership regimes, as well as regulating land administration and distribution, which includes social and economic land concessions (RGC, 2012).

The Environmental Protection and Natural Resource Management Law (1996) provides a basis for environmental protection, including requirements for environmental impact assessment (MAFF, 2010b). The Protected Areas Law (2008) is also important for the forestry sector. It provides the legal framework for the management, conservation and development of Protected Areas (PAs), which are under the jurisdiction of the Ministry of Environment (MoE).

In addition to these laws, a number of national programmes and strategies have been formulated to guide the management of forest lands and natural resources. These include the National Forest Programme (NFP) 2010-2029, the Na-

tional Biodiversity Strategy and Action Plan, the Strategic Planning Framework on Fisheries, as well as Sub-Degrees to implement the above mentioned laws.

The NFP 2010-2029 issued in 2010 is the main framework for sustainable forest management. Reflecting Cambodia's Millennium Development Goals (MDGs) for poverty reduction, environmental sustainability and attainment of 60% national forest cover by 2015, the NFP provides strategic direction and guides the long-term management of the country's forestry resource, introducing six programmes: (i) Forest Demarcation; (ii) Forest Resource Management and Conservation; (iii) Forest Law Enforcement; (iv) Community Forestry; (v) Capacity Development and Research; and (vi) Sustainable Forest Financing (MAFF, 2010a). The NFP applies only to the mandate of the FA. The National Protected Areas Strategic

Plan for the 3.1 million ha of PAs is still under development by the MoE (FCPF, 2011).

3.2. Forest category and key state agencies

Cambodia's forest areas are managed by three state agencies based on forest classification (Table 2). According to the Forest Law (2002), Permanent Forest Reserves are state property managed by the FA. Permanent Forest Reserves are further divided into three categories: Production Forest, Protection Forest and Conversion Forest. The General Department of Administration for Nature Conservation and Protection (GDANCP) of the MoE is responsible for the forest resources in Protected Areas, while the Fisheries Administration (FiA) under MAFF is responsible for Flooded Forests and Mangroves.

Table 2: Jurisdiction of forest lands in Cambodia

Forest Classification			Regulatory Agent
The Permanent Forest Estate	Permanent Forest Reserve (State Public Land)	Production Forest	FA/MAFF
		Protection Forest	FA/MAFF
		Conversion Forest	MAFF
	Private Forests (Forest plantations or trees on private land under registration)		FA/MAFF
Protected Areas			GDANCP / MoE
Flooded Forests and Mangroves			FIA/MAFF

Source: MAFF (2010b).

3.3. Forest ownership and community participation

The forest classification and management objectives determine the granting of use rights and responsibilities within the state forests. According to the Land Law (2001) and the Forestry Law (2002), forests in Cambodia are divided into state forest (under state public property and state private property), and private forest (under private property and indigenous property). However, in practice almost

all of the forest areas fall within the state property, and there are few private forests, partly because of the complex and drawn out registration process (MAFF, 2010b).

The Land Law (2001) allows the legality of communal land titles, and the Forest Law (2002) recognises the traditional forest use rights of local communities (Evans et al., 2012; Heng and Scheyvens, 2007). The framework for the management of community forests is provided by the Sub-Decree on Community Forestry Manage-

ment issued in 2003, which sets out the roles, responsibilities and rights of communities and their organisational structure (Ibarra et al., 2012). The customary land rights and use of natural resources are also recognised under the National Policy on Development of Indigenous Minorities (2009) and the Sub-Decree on Procedures of Registration of Land of Indigenous Communities (2009).

There are two types of community forestry schemes. Community Forests (CFs) are located in Production Forests within the Permanent Forest Reserve and are under the jurisdiction of the FA. By late 2010,

430 CFs were established in 20 provinces, covering 380,976 ha (RGC, 2012), though Ibarra et al. (2012) point to the heavy dependency of CF development on support from donors and NGOs. The second type of community forestry scheme is Community Protected Areas (CPAs). These are located in PAs and are under the jurisdiction of MoE. By 2006, 24 CPAs were officially established by the MoE (San, 2006). In both schemes ownership of forest resources remains with the government.

4. Interest in REDD+



The government's interest in climate change and REDD+ issues has been growing. An increase in average temperatures and changes in rainfall patterns and flooding events (Chandran, 2012) have stimulated discussion on climate change. Understanding of national vulnerability to climate change and opportunities for additional financing has encouraged the government to develop policy and organisation arrangements related to mitigation and adaptation. This includes establishment of the Climate Change Office within the MoE in 2003 and the National Climate Change Committee (NCCC) in 2006, as well as formulation of several policy documents such as the National Adaptation Programme of Action to Climate Change in 2006, the Green Growth Roadmap in 2009, and the Cambodia Readiness Plan Proposal on REDD+ (known as Cambodia REDD+ Roadmap) in 2010.

As a country with high forest cover and a high deforestation rate, REDD+ is highly relevant to Cambodia, having significant potential to increase the revenues from

forest management (Bradley, 2011) and secure and enhance ecosystem services. The government recognises this and other advantages of REDD+, such as the support it could provide to meet the 60% national forest cover target, and its biodiversity, poverty alleviation and sustainable forest management objectives. These potential benefits of REDD+ led the government to join the World Bank's Forest Carbon Partnership Facility (FCPF) and the UN-REDD Programme. After the approval of Cambodia's Readiness Plan Idea Note (R-PIN) by the FCPF in early 2009, the government prepared the Readiness Preparation Proposal (R-PP), which was approved by the FCPF in March 2011. Simultaneously, the government prepared Cambodia's UN-REDD Programme Document, which was approved by the UN-REDD Programme Board in 2011.

5. Organisational Framework for REDD+ Readiness and Implementation

About eighty per cent of Cambodia's forests are Permanent Forest Estate. As the FA is mandated to manage this estate, it is the lead agency in developing and coordinating national REDD+ processes. Notably, Sub-Decree 188 issued in 2008 provides the FA with special responsibility to conduct the quantity assessments of national forest carbon stocks, and to prepare and arrange for forest carbon trade and forest ecosystem services to increase revenue for effective management and development of forest (Bradley, 2011; Felicani-Robles, 2012).

While the FA is taking the lead on REDD+, the management of forest resources and other issues related to REDD+ involve a number of state agencies and ministries. The GDANCP under the MoE has responsibility to manage PAs, and the Department of Climate Change serves as the Secretariat of the National Climate Change Committee (NCCCC). As explained above, while the area is small, most flooded forests are under the jurisdiction of the FiA / MAFF. The mandate for land legislation is given to the Ministry of Land Management, Urban Planning and Construction (MLMUPC), while the Ministry of Interior (Mol) oversees decentralisation processes and local administrations, including communal land titles to indigenous groups. The Ministry of Rural Development (MRD) coordinates rural development programmes and projects, including indigenous issues.

With support from development partners, in particular the UN-REDD Programme, the organisational framework for REDD+ management has slowly evolved, bringing in the above mentioned agencies and ministries at different levels. The organi-

sation framework for REDD+ consists of (i) the National Climate Change Committee, (ii) the REDD+ Task Force, (iii) the Task Force Secretariat and the Technical Teams, and (iv) the REDD+ Consultation Group.

5.1. National Climate Change Committee (NCCC)

The National Climate Change Committee (NCCC), formed in 2006, is chaired by the MoE and includes representatives from 19 ministries. The NCCC is the highest governmental body for setting policy on mitigation and adaptation. It plays a key role in deciding the Government's position and strategy in international negotiations under the UNFCCC (FCPF, 2011).

5.2. Cambodia REDD+ Taskforce

The inter-ministry Cambodia REDD+ Taskforce was established in January 2010 as an interim measure to coordinate the development of the REDD+ Roadmap. In August 2012, the number of ministries participating in the Taskforce was increased as part of its re-organisation (Table 3). The REDD+ Taskforce was officially established in February 2013 by MAFF Decision No. 87 on Establishment of Cambodian REDD+ Taskforce.

While the Taskforce has not yet functioned effectively in serving as the main government body for REDD+, its expected roles and responsibilities include²:

- i) Managing and coordinating a process of strategies and terms of reference for project implementation;

2. <http://www.cambodia-redd.org/category/document-centre/consultation-group-national-redd-taskforce-minutes> (accessed 01 May 2013).

- ii) Managing and coordinating the implementation of the programmes;
- iii) Coordinating and making decisions for pilot project implementation;
- iv) Monitoring results of projects to ensure they are consistent within the current context of Cambodia;
- v) Reporting on project implementation to the Minister of MAFF every month.

Table 3: Membership of the Cambodia REDD+ Taskforce

Government Agency	Function in REDD+
MAFF	General jurisdiction over forest, fisheries and agriculture
-Forestry Administration	Regulation of permanent forest estate
-Fisheries Administration	Management of flooded forests and mangroves
MoE	Jurisdiction over protected areas / international environmental treaties / UNFCCC focal point Management of protected areas and community protected areas, Climate change policy coordination, GHG inventories
Ministry of Interior (Mol)	Guide and control all levels of local administration and conduct registration of indigenous peoples' communal land titles
Ministry of Economy and Finance (MEF)	Management of state properties and revenues, including sales, transfer, leases, and concessions
Ministry of Land Management, Urban Planning and Construction (MLMUPC)	Land management, including cadastral administration of state land, public and private state land and private land registration Mapping and land-use planning in collaboration with relevant ministries
Ministry of Rural Development (MRD)	Indigenous peoples policy / rural infrastructure development
Ministry of Industry, Mine and Energy	Mining concession

Source: FCPF (2012); REDD Desk (n.d.); RGC (2012).

5.3. Taskforce Secretariat and Technical Teams

The Taskforce Secretariat was established in the FA to provide administrative support to the REDD+ Taskforce and conduct day-to-day management at the operational level. The Secretariat's members are from the FA and the MoE and staff hired with funding from the UN-REDD Programme (FCPF, 2013). To ad-

dress technical issues associated with REDD+, the following Technical Teams are under development:

- REDD+ Projects Technical Team: responsible for developing guidelines for pilot projects.
- REDD+ Benefit-sharing and Revenue-distribution Technical Team: responsible for developing REDD+ revenues management framework and

guidelines for local benefit-sharing arrangement.

- **MRV/REL Technical Team:** responsible for developing Cambodia’s REL and establishing MRV system for forest carbon.
- **Consultation and Safeguards Technical Team:** responsible for developing consultation plan, the strategic environmental and social assessment framework, and the monitoring system for multiple benefit, other impacts and governance (FCPF, 2011).

framework. The REDD+ Consultation Group is expected to provide comments and insights to the REDD+ Taskforce and national REDD+ process, as a forum to represent the views of different stakeholder groups including NGOs, civil society, indigenous groups, the private sector, academic institutions, and groups of community forestry networks.³ Being responsible for linking Cambodia’s REDD+ with existing stakeholder networks, the Consultation Group is also expected to support the Consultation and Safeguards Technical Team.

5.4. REDD+ Consultation Group

In recognition of the importance of stakeholder consultation and participation in the REDD+ process, the government decided to set up the REDD+ Consultation Group within the REDD+ organisational

5.5. Coordination arrangements for REDD+

Figure 3 illustrates the planned organisational arrangement for the development and implementation of REDD+ in Cambodia. The REDD+ Taskforce and the Taskforce Secretariat supported by Technical

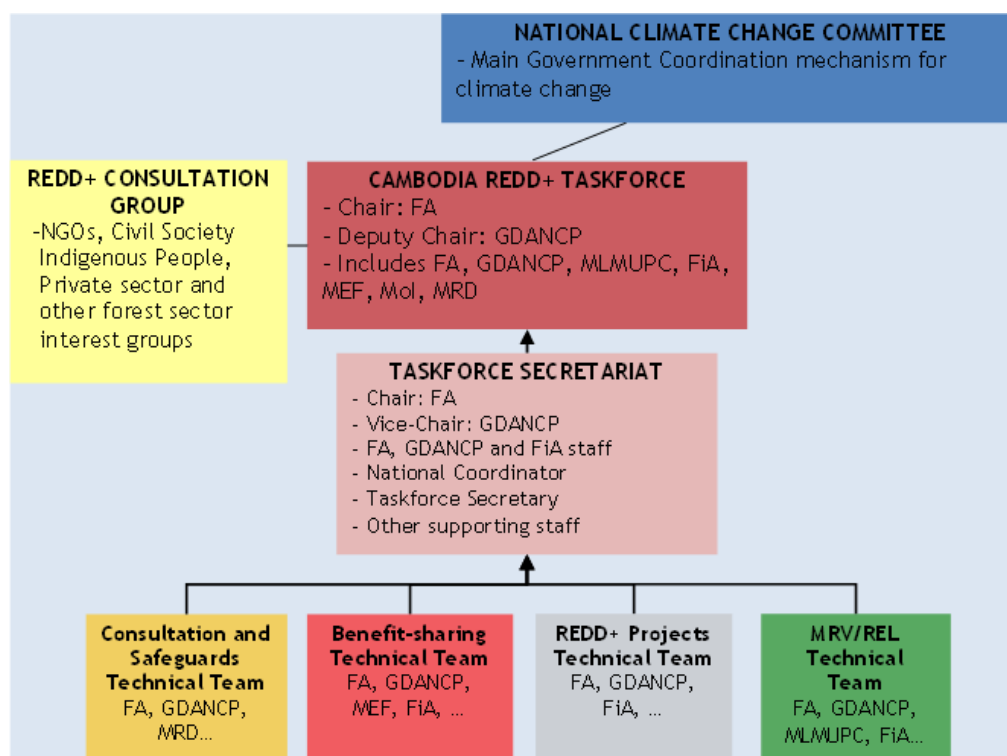


Figure 3: Proposed national REDD+ coordination arrangement

Source: Modified from Cambodia REDD+ Taskforce (2011b).

3. <http://www.cambodia-redd.org/category/document-centre/consultation-group-national-redd-taskforce-minutes> (accessed 01 May 2013).

Teams are the key government bodies responsible for managing the REDD+ process. The FA and the GDANCP are intended to be the executing agencies engaged in developing and implementing REDD+ actions through the Taskforce Secretariat, working closely with the UN-REDD+ Programme. Other ministries are involved in decision-making at higher levels through the REDD+ Taskforce and the NCCC, as well as in technical assessment and consultation processes in accordance with their mandates.

Through the REDD+ Consultation Group, the arrangement would involve a wide range of actors, including civil society, indigenous groups and the private sector. It is expected that this structure will ensure stakeholder engagement in the REDD+ process in Cambodia.

However, it should be noted that the coordination arrangement for REDD+ is still under development, and currently the FA plays the main role in the overall management of REDD+. In addition, the illustrated arrangement does not show how local governments would be involved in the REDD+ process and how coordination across levels of government will be organised is still unclear. Cambodia's R-PP does not mention whether a mechanism for coordination with sub-national actors is intended (WRI, 2011).

6. Technical and Financial Support



The development of REDD+ readiness in Cambodia has been largely supported by international donors. Key multilateral and bilateral support has been provided through the UN-REDD Programme, the World Bank's FCPF, the United Nations Development Programme (UNDP), the Food and Agriculture Organisation of the United Nations (FAO) and the Japan International Cooperation Agency (JICA). The financial assistance from these donors amounts to more than USD 18 million (Table 4).

The UN-REDD Programme provides assistance for a wide range of readiness activities in Cambodia. The inception process for the UN-REDD Programme in Cambodia was completed in 2011/2012. With a focus on stakeholder engagement, the Country Programme is aimed at developing a national REDD+ strategy and implementation framework, strengthening capacity to manage REDD+ at sub-national levels; and designing a monitoring sys-

tem.

Cambodia has applied for a grant of USD 3.6 million to the FCPF to implement the REDD+ Roadmap. It is expected that the FCPF funds will be available in the latter years of the REDD+ readiness process (UN-REDD Programme, 2011). The UNDP was requested by the government to serve as the delivery partner for the FCPF funds (FCPF, 2012).

Japan is also an important development partner for Cambodia on REDD+ readiness. JICA assists various readiness activities, with a particular focus on the forest monitoring system, RLs/REL, and sub-national activities. JICA aims to provide capacity building and technology transfer through CAM-REDD, a bilateral project to facilitate the implementation of the REDD+ strategy and policy. In addition, the Government of Japan pledged about USD 8 million to the RGC to support both REDD+ readiness and implementation of the NFP.

Other donors that have played key roles in providing support to national resource management in Cambodia, such as the development of the NFP, forest demarcation activities and forest cover assessment, are the Danish International Development Agency (DANIDA), the UK Department for International Development (DFID) and New Zealand Aid.

The Technical Working Groups on Forestry and Environment (TWGF&E) was established in 2004 to provide a donor coordination mechanism for supporting development activities within forestry and environment sectors. The need for the UN-REDD Programme, the FCPF, CAM-REDD, TWGF&E and other development partners to work closely to ensure synergies and avoid duplication is recognised by the development partners.

Table 4: Key multilateral and bilateral support to Cambodia REDD+

Project Name	Objectives	Provider	Executing Agency	Period	Total USD
Implementation of the REDD+ Roadmap	To implement the Cambodia REDD+ Roadmap with a focus on consultation process, REDD+ strategy, implementation framework, a reference level and a monitoring system	UN REDD	RGC, FA, REDD+ Taskforce	Planned 2012-2014	3.0 million
		UNDP, FAO		N.D.	1.5 million
		FCPF		For 3 yrs	3.6 million
National Forest Inventory (NFI) project	To provide technical support and information for developing policies and measures necessary for the NFI and emission factors	FAO	FA, MAFF	2012-	N.D.
UNDP Sustainable Forest Management Project (SMF Project)	To strengthen national SMF policy, integrate community-based sustainable forest management into policy, and develop frameworks and markets that reduce carbon emissions	UNDP, GEF	FA	2011-2015	3.86 million
Grant Aid for the Forest Preservation Programme	To support REDD+ Readiness and NFP implementation with a particular focus on the forest inventory and MRV system	Japanese Government	FA	2011-2013	8 million
CAM-REDD	To support REDD+ Readiness, REDD+ demonstration projects and NFP implementation	JICA	FA	June 2011 to May 2016	2 million

Source: Cambodia REDD+ Taskforce (2011a); UN-REDD Programme (2011, 2012); Lao (2012).



7. National REDD+ Strategy

7.1. Process of developing strategy

Since COP13 in Bali, Cambodia has been active in moving forward with the development of a national REDD+ system and strategy. The FA has been leading these efforts, supported by the donors as described in Table 4. In addition, there has been strong engagement of NGOs in driving national REDD+ readiness, including the National Climate Change Network, the Wildlife Conservation Society (WCS), Pact Cambodia, RECOFTC - The Center for People and Forests (RECOFTC), and Conservation International (CI) (Bradley, 2011).

The key documents to design the national REDD+ system, including options for the REDD+ strategy, are the REDD+ Roadmap, the R-PP, and the Cambodia UN-REDD Programme Document. Led by the interim REDD+ Taskforce, the Cambodia REDD+ Roadmap was elaborated using the R-PP template, focusing on the six main components of REDD+ Readiness: (1) Management of national REDD+ readiness; (2) Consultation, stakeholder engagement and awareness-raising plan; (3) Development and selection of REDD strategies; (4) Implementation framework (including benefit-sharing and safeguards); (5) Development of Reference Levels or Reference Emissions Levels (RLs/REs); (6) Development of the monitoring system for national Monitoring, Reporting and Verification (MRV) (Cambodia REDD+ Taskforce, 2011a).

The third version of the REDD+ Roadmap was agreed by stakeholders including government agencies, donors and NGOs in late September 2010, and the fourth version was completed in March 2011. Being linked to the UN-REDD National Programme, the REDD+ Roadmap is recognised as the national plan on how the government wants to move ahead with REDD+ Readiness (Cambodia REDD+ Task-

force, 2011a; UN-REDD Programme, 2011). In addition, the R-PP was elaborated based on the Roadmap third version, using the same text.

The UN-REDD Programme provided key support for the government to develop the REDD+ Roadmap. The UN-REDD Programme states that the REDD+ Roadmap was developed through an inclusive consultation process involving a wide range of stakeholders, such as conservation NGOs, civil society, the private sector and indigenous peoples (UN-REDD Programme, 2011). The government set up the Consultation Group, consisting of NGOs and civil society, to encourage stakeholder participation in this process.

However, it is not clear whether sub-national and non-state actors, including provincial and district governments, have been fully involved in the REDD+ process. Since stakeholders outside central government, including local authorities and non-state actors, often lack access to information, the development of informative tools and materials on REDD+ and awareness raising activities are critical to furthering multi-stakeholder engagement in the REDD+ process.

7.2. Features of the strategy

As described in the R-PP, the government places the development of the REDD+ strategy within the existing forest policy framework and strategies (WRI, 2011). Accordingly, much of the REDD+ strategy options to reduce carbon emissions from forests are based on scaling-up implementation of the NFP, the planned National Protected Area Strategic Management Plan, and the Strategic Planning Framework for Fisheries (FCPF, 2011). In other words, REDD+ in Cambodia is viewed as providing an additional and sustainable source of finance for supporting the implementation of these three key long-term management plans, as can

be seen by the fact that in the NFP, REDD+ is highlighted under Programme 6 on Sustainable Financing.

Table 5 summarises the major forest sector policies and programmes that would contribute to reducing carbon emissions from deforestation and forest degradation.

Table 5: Key programme and policy to address deforestation and forest degradation in Cambodia

Policy	Previous policy performance	Potential to contribute to REDD+	Challenges to implementation
Forest Demarcation	<ul style="list-style-type: none"> - Pilot projects for developing methods in four provinces (Preah Vihear, Mondulhiri, Karatie, and Kampot) - Around 600 km of permanent forest estate demarcated 	<ul style="list-style-type: none"> - Forest demarcation and registration would make land clearance and the issuance of informal land concessions more difficult - Demarcation serves as a base for REDD+ MRV and a national carbon accounting 	<ul style="list-style-type: none"> - A lack of clearly boundaries between different forest types - Lack of sectoral coordination - Lack of financial and technical capacity for mapping and demarcation
Sustainable Forest Resource Management and Conservation	<ul style="list-style-type: none"> - Seven forest management models (e.g. PA, Protection Forest, and CF) developed - 3.1 million ha are designated as a Protected Areas under the MoE 	<ul style="list-style-type: none"> - Sustainable forest management is one of the five REDD+ activities - Classification of forest land into management units will improve forest conservation 	<ul style="list-style-type: none"> - Incomplete information on forests including boundaries and forest composition - Lack of management plans based on forest data - Lack of capacity to manage and monitor forest in remote areas - Lack of subsidiary regulations for Protected Areas under the Protected Areas Law (2008) - Domestic demand for timber
Forest Law Enforcement and Governance	<ul style="list-style-type: none"> - Review of forest concession performance in 1999/2000 - Imposition of a logging moratorium since 2002 	<ul style="list-style-type: none"> - Law enforcement and good governance would prevent illegal activities including logging, encroachment, and land grabbing 	<ul style="list-style-type: none"> - Absence of management plans, lack of demarcated boundaries, and inadequate personnel and financial resources for law enforcement activities - Conflicting laws and overlapping land concessions - A significant amount of timber production originates from illegal logging

Table 5: Key programme and policy to address deforestation and forest degradation in Cambodia (continued)

Policy	Previous policy performance	Potential to contribute to REDD+	Challenges to implementation
Community Forestry (CF)	<ul style="list-style-type: none"> - Development of legal framework for CF and procedure established - 420 CFs established covering about 0.4 million hectares by 2010 	<ul style="list-style-type: none"> - Provision of incentives to local communities to implement sustainable forest resource management - Community involvement will help secure the social safeguards of REDD+ 	<ul style="list-style-type: none"> - Weak status of civil society organisations - Capacity building is required for governmental staff to carry out the CF scheme - Incomplete legal framework for CPA scheme - Inadequate legal framework for indigenous land titling - Poor government coordination and lack of policy support for community forestry

Source: DFID (2007); Broadhead and Izquierdo (2010); FAO (2010a); MAFF (2010b); Yasmi et al. (2010); Bradley (2011); FCPF (2011); UN-REDD (2011).

Most of the policies listed in Table 5 are at an early stage of implementation. Full implementation of these policies will require substantial financial and human resources, technical and institutional capacity building, improved sectoral coordination, and development of regulatory frameworks. One of the key challenges that REDD+ has to face in Cambodia is how to conserve forest carbon stocks while meeting domestic demand for timber and wood products. In addition, REDD+ must address drivers from outside the forestry sector causing large-scale land-use change. As described in Section 1.3, these include migration into forested areas, large-scale agriculture developments under ELCs, poor Environmental and Social Impact Assessment (ESIA) regulations and lack of implementation, limited implementation of land-use planning, overlapping or unclear jurisdictions, and economic incentives promoting forest clearance. Coordination of government agencies at the highest levels is thus critical to the implementation of REDD+ strategies in Cambodia.

According to the R-PP, the government

first aims at effective management of Cambodia's forest in accordance with existing policies and strategies, and second at addressing drivers from outside the forestry sector. Several implementation strategies have been proposed in the REDD+ Roadmap and the R-PP, including:

- Innovative financing models to provide an alternative to ELCs and support the protection and enhancement of forest carbon;
- Local forest protection contracts to support the engagement of local communities in forest conservation and serve as a basis for future benefit-sharing mechanisms;
- Valuing forest ecosystem services and promoting REDD+ co-benefits to help policy-makers to evaluate the trade-offs between maintaining standing forests and conversion to alternative land uses, beyond REDD+ values alone; and
- Adopting the nested approach to integrate sub-national actions into a national framework.

Other possible candidate REDD+ strategies to address drivers from outside the forestry sector include:

- Engaging the judiciary, police, and local and provincial authorities;
- Reviewing land concession regulations;
- Developing REDD+ concessions;
- Reviewing ESIA regulations;
- Integrating REDD+ into land-use planning processes at sub-national levels (Cambodia REDD+ Taskforce, 2011a; FCPF, 2011).

While the REDD+ Roadmap and the R-PP provide a list of possible countermeasures to some of the drivers from outside the forestry sector, they provide little analysis of these drivers, in particular with regards to the mining and agricultural plantation sectors. There appears to be reluctance in the REDD+ Roadmap and the R-PP to take on these drivers. They explain that tackling the drivers outside the forest sector is challenging and that analysis will be conducted when developing the REDD+ strategies. The R-PP (2011) proposes the idea of developing a method through which REDD+ will be incorporated into land-use planning processes.

8. Forest Monitoring System for monitoring and reporting REDD+ activities



8.1. Satellite-based land monitoring system

Cambodia's forest cover has been assessed six times since 1988/1989 using satellite images (Table 6). To strengthen its satellite-based land monitoring system, the government established the Remote Sensing and Geographic Information System (RS-GIS) Unit in 1995 with support from the German Development Agency (GIZ) and FAO.

While the government has periodically monitored forest cover change for the last two decades, some of the results cannot be compared due to the different analytical methods used for the assessments (e.g. land class items, mapping scale unit) (FCPF, 2011). The most recent forest cover assessment for 2010 was conducted using the same methodology as

for the 2002 and 2005/06 assessments in order to make it possible to analyse forest cover change from 2002 to 2005/06 to 2010 (Leng, 2011).

Another challenge related to satellite-based forest monitoring is how to detect and interpret forest degradation and enhancement of forest carbon stocks. While high-resolution imagery helps to capture forest degradation and other forest activities recognised under REDD+, the images and analysis are costly, and the number of mapping experts in Cambodia that can do the analysis is limited.

Table 6: Forest cover assessments in Cambodia

Year	Satellite image	Organisation	Interpretation
1988/1989	LANDSAST	Mekong Secretariat	Visual interpretation
1992/3	LANDSAST	Mekong River Commission / GTZ	Visual interpretation
1996/7	LANDSAST	FA with Mekong River Commission and GTZ	Visual interpretation
2002	LANDSAT ETM+	FA with DANIDA	Manual on-screen visual interpretation
2005/06	LANDSAT ETM+	FA with DANIDA	Manual on-screen visual interpretation
2010	LANDSAT TM	FA with DANIDA and ITTO	Manual on-screen visual interpretation

Source: FCPF (2011); Leng (2011).

8.2. Ground-based forest carbon inventory

Forest inventory plays an important role in REDD+. Forest sampling is required for accurate estimates of carbon stocks in above and belowground forest biomass, which are needed to monitor carbon emissions and removals.

In Cambodia, the forest inventory has not been fully completed. The FA is mandated to undertake the National Forest Inventory (NFI) as part of the NFP. With support from FAO through the NFP project launched in 2012, the government

aims to establish proper methodologies for data collection and monitoring for the national REDD+ programme.

There are a range of forest biomass datasets developed by various organisations including government agencies, overseas research institutions and international NGOs (Table 7). While these datasets cover major forest types, the surveys have focused mostly on above-ground biomass (UNEP-WCMC, 2010). There is a need to conduct further surveys on all significant carbon pools and to calculate country specific parameters including conversions factors for each ecosystem type.

Table 7: Existing forest carbon plot data in Cambodia

Name of Data / Source	Year	# plots	Forest Types	Mini DBH (cm)
Permanent Sample Plots (PSPs) - FA	1998	120	n/a	>7.5
	2004	104	n/a	>7.5
	2010	48	n/a	>7.5
Regrowth Forest	2010	15	n/a	>7.5
Strategic Forest Management Plan (SFMP) / FA	2002	2000	Unlogged Evergreen	Sapling
		1760	Logged Evergreen	
		1460	Unlogged Mixed	
		300	Logged Mixed	
		1360	Unlogged Deciduous	
		60	Logged Deciduous	

Table 7: Existing forest carbon plot data in Cambodia (continued)

Name of Data / Source	Year	# plots	Forest Types	Mini DBH (cm)
Tani et al., 2007 - Kyoto University	2003-5	34	Semi-Evergreen, Deciduous	>10
Kiyono et al., 2010 - FFPRI	2005	12	Evergreen, Deciduous, Secondary forests	>5
Seima Carbon Stock Survey - WCS, FA	2008	225	All dryland types	>5
Preah Vihear Pilot Stock Survey - WCS, FA, GDANCP	2010	72	All dryland types	>5
Seima High Valued Forest survey - WCS, CDRI, FA	2004	9	Semi-evergreen, Evergreen	>20
Cherndar High Value Forest Survey - WCS, CDRI, FA	2004	15	Evergreen	>20
Oddar Meanchey Carbon Stock Survey - CFI, TGC, PACT, FA	2008-2010	126	All dryland types	n/a
Southern Cardamoms Carbon Stock Survey - ONFI, Wildlife Alliance, FA	2010	124	All dryland types	>5
Action Learning for Community Carbon Accounting in Seima Protection Forest, Cambodia - WCS, FA, IGES	2011	16 70	Deciduous, evergreen/semi-evergreen forest Deciduous, evergreen/semi-evergreen forest	>10 6-tree method

Source: FCPF (2011); (Evans et al., 2011).
Note DBH = diameter at breast height.

8.3. Development of the national MRV system

Cambodia's MRV system is still at an early stage of development, and there is an urgent need to strengthen technical and institutional capacity, especially on inventory, carbon measurement and mapping. Work on forest stratification and emission factors is also required. National forest cover for 2010 was assessed using the NFP classification of forests (Leng, 2011). This is an important reference for the MRV system, but further stratification work is needed. To monitor and project forest carbon stock changes requires mapping not only of forest types (Evergreen, Semi-evergreen, Deciduous, etc.), but also of forest management regimes (conservation, sustainable forest

management, etc.) (UNEP-WCMC, 2010).

In addition, designing a national MRV framework needs to accommodate the different roles and responsibilities of the various government agencies that have jurisdictional authority over forest resources and land use. The MRV/REL Technical Team under the REDD+ Taskforce, which includes representatives from the FA, the GDANCP, the FiA and MLMUPC, has a key role to play in coordinating the technical activities related to the design of the national forest monitoring system.

9. Forest reference emissions level (REL) / reference level (RL)



Following UNFCCC Decision 4/CP.15, Cambodia is seeking to develop its REL/RL based on historical trends and national circumstances, using historical data and assessment models (FCPF, 2011). With this objective in mind, the R-PP set up three sub-goals:

- Quantification of historic emissions/removals from the five REDD+ activities for an appropriate historical reference period on a national scale, using the Intergovernmental Panel on Climate Change (IPCC) guidelines and guidance;
- Understanding Cambodia's national circumstances;
- Development of future trajectories of emissions/removals over different time periods (e.g. five and ten year periods) and under different economic and development scenarios.

Based on the available data sets and their comparability, the reference period is likely to be from 1998 to 2010 (FCPF, 2011, 2013). The development of a robust national REL/RL will not be possible until a national forest carbon inventory has been conducted.

The nested approach proposed in the REDD+ Roadmap and the R-PP has implications for setting RELs/RLs and a carbon

accounting system. Cambodia needs to define sub-national boundaries, and design an institutional arrangement and accounting system to integrate sub-national RELs/RLs into a national REL/RL. As deforestation rates vary from region to region, but do not necessarily coincide with existing administrative boundary, defining sub-national boundaries and integration between project, sub-national and national reference levels poses a great challenge.

Assessing “national circumstances” is another challenge. This task includes the analysis of socio-economic data, projection of future development trends and deforestation drivers, as well as assessment of potential impacts from global trends in demand and prices for Cambodia's land-based commodities (UN-REDD Programme, 2011). In addition to meeting the technical challenges that this task requires, a proper process must be put in place to engage a range of stakeholders and to ensure transparency. Many interests are at stake because “national circumstances” refers to economic development policies, including land-use planning, that impact the entire population.

10. Safeguards



10.1. Approach to safeguards

Cambodia is still at the very early stage of developing a REDD+ safeguards system, as required of countries preparing for REDD+ by the UNFCCC decisions. Prior to defining its national approach, the government recognises the importance of stakeholder engagement and consultation processes to identify a set of nationally appropriate safeguards (FCPF, 2011). The proposed Consultation and Safeguards Technical Team under the REDD+ Taskforce will be responsible for elaborating a consultation plan. The Team is also expected to develop a strategic environmental and social assessment framework, and a system for monitoring and reporting social, environmental, governance-related and other impacts of REDD+. The REDD+ Roadmap states that this assessment and monitoring system will be built on the Strategic Environmental and Social Assessment (SESA) framework used by the World Bank, and this will provide coherence with the World Bank's safeguard policies.

In addition, it should be noted that as a UN-REDD country, Cambodia needs to comply with the relevant guidance from the UN-REDD Programme (FCPF, 2011). This includes operational guidance on the engagement of indigenous peoples and other forest dependent communities and United Nations Declarations on the Rights of Indigenous Peoples.

The UNFCCC REDD+ safeguards on the rights and participation of indigenous people and local communities are especially relevant to Cambodia. In 2009, 236 conflicts over land between communities and outsiders were recorded, followed by 28 new cases in 2010 (The NGO Forum on Cambodia, 2011). In particular, the highlands of Ratanakiri, Mondulakiri and Stung Treng have been hotspots for conflict

over forest and land rights issues (Nguyen et al., 2010).

The concept of Free, Prior and Informed Consent (FPIC), recognised by the UN-REDD Programme, should be emphasised in the REDD+ strategy. Anderson (2011) describes FPIC as “the establishment of conditions under which people exercise their fundamental right to negotiate externally imposed policies, programs, and activities that directly affect their livelihoods or wellbeing, and to give or withhold their consent to them.” FPIC is vital for addressing the REDD+ social safeguards, providing processes to avoid the denial of basic rights and conflict with indigenous people and local communities, and to encourage their engagement in REDD+. However, the REDD+ Roadmap and R-PP provide little discussion on FPIC and only state that “FPIC must be adhered with respect to UN REDD Programme activities.”

A number of challenges will have to be met for these safeguards to be fully addressed. The legal analysis conducted by Oberndorf (2010) as a part of the R-PP preparation process argues for the need to revise existing frameworks for environmental and social impact assessment. Greater guidance is required for the implementation of environmental impact assessments, as the current guidelines for Preparing the Environmental Impact Assessment (EIA) Report (2000) are deficient in this regard (FCPF, 2011). The legal framework also needs to be developed to include social impact assessment, with guidance to inform implementation (ibid.).

10.2. Activities on safeguards

During the R-PP formulation process, a number of SESA activities were undertaken, including: (1) stakeholder analysis

and identification of key stakeholder coordination mechanisms; (2) consultation on appropriate national safeguards for REDD+ readiness during the second national multi-stakeholder consultation for the R-PP; and (3) establishment of a consultation and participation plan, which is presented in the R-PP.

Recent developments of the policy framework for community forestry support the REDD+ safeguards on rights and participation. The government has developed procedures for the legal establishment of community forest site with support from RECOFTC. The process comprises information collection using participatory rural appraisal; area identification, demarcation and planning; and establishment of committees, regulations and agreements. This registration process can provide important experiences to the government

regarding how communities can be informed and involved in the process of project development and forest management.

Two key REDD+ pilot projects are testing tools and providing lessons on safeguards. Both projects applied for voluntary validation against the Verified Carbon Standard (VCS)⁴ and the Climate Community and Biodiversity (CCB)⁵ Standards. The Oddar Meanchey REDD+ Project has applied FPIC-like processes and developed operational procedures for social and biodiversity assessment (Bradley, 2011). The Seima Protection Forest REDD+ Project is considering local participation and a possible benefits distribution system in the context of communal land titling and Protection Forests. It also intends to implement FPIC (Evans, 2011).

11. REDD+ Demonstration Activities and Projects



Since 2008, several REDD+ demonstration activities including pilot projects and feasibility studies have been implemented, mostly in forest areas under the jurisdiction of the FA. Among these, the Oddar Meanchey REDD+ Project and the Seima Protection Forest REDD Project have

shown significant progress, though are not free of challenges. Table 8 summarises the features of the projects. Being implemented under different legal frameworks, the two projects propose different forest management measures, though both focus on community participation.

4. The Verified Carbon Standard (VCS) is a voluntary greenhouse gas programme that provides verification of methods to quantify climate benefits and validation of carbon offsets.

5. The Climate, Community and Biodiversity (CCB) Standards were developed to evaluate land-based carbon mitigation projects. The CCB Standards do not verify the quantification of climate benefits, but aim to identify and guide the development of climate projects that provide positive climate, community and biodiversity outcomes.

Table 8: Features of the two REDD+ pilot projects in Cambodia

Project title	Location	Proponents	Major activities	Validation	Estimated credits	Expected sale of credits
The Oddar Meanchey REDD+ Project	Oddar Meanchey province	FA, PACT, Terra Capital, others	- Community forest management rights and land-use plans - Protection against illegal logging - Fire prevention, etc.	Acquired VCS and CCB Alliance validation	7.1 million tCO ₂ e over 30 years.	USD 31 million over 30 years
The Seima Protection Forest REDD Project	Seima Protection Forest in Mondulkiri province	FA, WCS	- Forest demarcation and law enforcement - Forest patrol and monitoring - Communal land titling and buffer zone forest management - Livelihood development	Preparation for VCS and CCB Alliance validation	1.57 million tCO ₂ e over first 5 years	USD 5.4 million revenue

Source: Clements (2009); IGES (2011); Evans et al. (2012).

Through Decision number 699 of the Council of Ministers dated May 2008, the Oddar Meanchey REDD+ project became the first officially recognised REDD+ pilot project in Cambodia (Bradley, 2011). The project involves 13 Community Forest sites covering approximately 68,000 ha of Production Forest (IGES, 2011). In September 2012, the project received validation under the VCS as the first Community-based Mosaic REDD+ project in Southeast Asia. In October 2012, the project acquired CCB Gold validation (REDD Desk, n.d.). Zsombor and Kuch (2013) report that the project is now experiencing some difficulties with the trading of carbon offsets.⁶

The Seima Protection Forest REDD Project explores REDD+ under the legal framework for Protection Forests and in-

igenous communal lands in Mondulkiri province. The project aims to provide the government with long-term support for conservation, and to encourage local communities and local authorities to participate in conservation efforts (Biddulph, 2012). The FA expects that the project will provide a sustainable conservation model for Protection Forests for the national REDD+ strategy, as it sees REDD+ as providing new finance for the management of these forests. The project area reflects the problems faced by Protection Forest management in Cambodia, where the forests hold high biodiversity values, but are also homes to indigenous minorities (in the case of the Seima Protection Forest, Bunong communities) (Evans et al., 2012).

In addition to the two pilot projects,

6. See: <http://www.cambodiadaily.com/archive/a-troubled-start-for-cambodias-carbon-credits-31277/>.

Wildlife Alliance is implementing a REDD+ project in Southern Cardamom protected forest in collaboration with the FA and the Office National des Forêts (ONF) International. The project, located in the Southern Cardamom Mountains, which is the second largest contiguous rainforest in Southeast Asia, aims to achieve forest conservation through forest protection and law enforcement, as well as providing alternative livelihoods and revenues to local people.⁷ The project designers aim to submit the project to the VCS and the CCB Alliance for validation.

In partnership with the FA, Fauna & Flora International (FFI) launched the REDD+ Community Carbon Pools Programme in

the Community Forests of Siem Reap province in 2013, as a part of a larger regional initiative covering four countries in Southeast Asia.⁸ The proposed REDD+ actions include forest management by communities across 34 Community Forestry sites covering over 15,000 ha. Another REDD+ pilot activity is planned by WCS and the MoE for Kulen Promtep Wildlife Sanctuary, Northern Plains, Preah Vihear province. WCS has conducted a feasibility study, including analysis of past and future deforestation rates under different scenarios and drivers of deforestation, and a preliminary assessment of carbon stocks.⁹ Another REDD+ feasibility study was conducted by Conservation Interna-

12. Conclusion



REDD+ presents significant opportunities for emissions reductions in Cambodia (RGC, 2012). Following UNFCCC Decision 2/CP.13 in 2007, with support from international development partners the government has been making efforts to develop a national REDD+ system. These efforts have resulted in the establishment of an organisational framework for REDD+ readiness, the formulation of REDD+ strategy documents, and implementation of site-based REDD+ pilot projects.

The government has not set out new activities for forest management that REDD+ could support. Rather, it views REDD+ as providing additional finance to implement strategies laid out in existing

plans such as the NFP. The REDD+ demonstration activities have an important role to play in identifying workable REDD+ models that provide climate benefits while addressing the REDD+ safeguards. The Oddar Meanchey REDD Project is one of a small number of demonstration activities globally that have acquired dual VCS and CCB Alliance validation. The challenge now is to move beyond design to actual implementation, which requires strong commitment from government, given the pressure on forest land from plantation and agricultural developers.

REDD+ is a relatively new concept and effective sectoral coordination during the current readiness phase is yet to be

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7. Wildlife Alliance website: <http://www.wildlifealliance.org/page/view/86/economic-incentives>.
 8. FFI website: <http://communitycarbonpool.info/2013/04/12/ffis-community-forestry-redd-project-launched-in-siem-reap/>.
 9. WCS website: <http://programs.wcs.org/cambodia/ConservationChallenges/ClimateChange/NorthernPlainsREDDupdate.aspx>

achieved. REDD+ needs to be recognised not only by the forestry sector, but also by other land use sectors including agriculture and mining, and to be integrated into broader land use planning mechanisms at both national and sub-national levels. Effective coordination within the recently reformed REDD+ Task Force and the creation of strong Technical Teams are keys to the multi-sectoral approach that Cambodia requires to combat the drivers of deforestation and forest degradation.

Capacity building of the FA and other government departments is critical for Cambodia to move forward on REDD+ readiness. Capacity building is required on a broad range of subject matter, including forest monitoring and inventory, land use planning, stakeholder consultation processes, sectoral coordination at sub-national and national levels, financial management and benefit distribution.

A key to REDD+ in Cambodia is to ensure that the rights and participation of indigenous people and local communities are promoted through consultation processes on strategy development and the implementation of REDD+ actions. As the economic value of forests increases, implementation of REDD+ will have the potential to intensify conflicts over forest resources (Sam, 2010). Land and forest de-

velopment in Cambodia have created numerous conflict between developers and local communities / indigenous people. These conflicts highlight the importance of the REDD+ safeguards for Cambodia. FPIC principles can contribute to protecting the rights of local communities and indigenous people, and open up avenues for their meaningful participation in REDD+ decision-making and implementation. REDD+ demonstration activities provide important opportunities for developing, testing and building capacity on the FPIC concept. At the site level, Evans et al. (2012) point out the potential of REDD+ projects to strengthen community access to forest resources and agricultural land tenure. Delivering local benefits is necessary for REDD+ to be socially accepted and to achieve long-term emissions reductions.



References

- Amariei, L. (2004). Capacity Building for Law Compliance in the Forest Sector Case study: Cambodia. *Independent Forestry Consultant Final report prepared for FAO/ITTO*.
- Anderson, P. (2011). Free, Prior, and Informed Consent in REDD+: Principles and Approaches for Policy and Project Development. Bangkok: RECOFTC and GIZ.
- Biddulph, R. (2012). REDD and Poverty in Cambodia. *FOCALI Report*. Gothenburg, Sweden: Forest, Climate and Livelihood research network.
- Bradley, A. (2011). Review of Cambodia's REDD Readiness: Progress and Challenges. *Occasional paper No.4*. Hayama: Institute for Global Environmental Strategies.
- Broadhead, J. and Izquierdo, R. (2010). Assessment of land use, forest policy and governance in Cambodia. *Working paper: Food and Agriculture Organisation Regional Office for Asia and the Pacific*.
- Cambodia REDD+ Taskforce. (2011a). *Cambodia Readiness Plan Proposal on REDD+ (Cambodia REDD+ Roadmap) Version 3.3*.
- Cambodia REDD+ Taskforce. (2011b). *Cambodia Readiness Plan Proposal on REDD+ (Cambodia REDD+ Roadmap): Version 4.0*.
- Chandran, P. (2012). Voices of the forest: building partnerships for community forestry in Cambodia: RECOFTC.
- Clements, T. (2009). Carbon credits from avoided deforestation pilot project in the Seima Biodiversity Conservation Area, Cambodia. *Presentation at the Translinks REDD Workshop*. 22 June, 2009. Bronx, New York: World Conservation Society.
- DFID. (2007). *Crime and persuasion: tackling illegal logging, improving governance*. Retrieved from <http://courses.washington.edu/esrm200/illegal-logging-report.pdf>.
- Evans, T. (2011). Seima REDD+ Demonstration Site. *Presentation at the Inception Workshop for Cambodia UN-REDD National Programme*. 17 November, 2011. Phnom Penh: UN-REDD Programme.
- Evans, T., Arpels, M., and Clements, T. (2012). Pilot REDD Activities in Cambodia are Expected to Improve Access to Forest Resource Use Rights and Land Tenure for Local Communities. In L. Naughton-Treves & C. Day (Eds.), *Lessons about Land Tenure, Forest Governance and REDD+: Case Studies from Africa, Asia and Latin America*. (pp. 73-82). Madison, Wisconsin: UW-Madison Land Tenure Center.
- Evans, T., Thannarak, C., Mesa, H., Trey, E., Mohns, B., Bruyn, T., Bianchi, S. and Dedinas, K. (2011). *Action Learning for Community Carbon Accounting in Seima Protection Forest, Cambodia*. Internal report submitted to Institute for Global Environmental Strategies.
- FA. (2011). *Cambodia Forest Cover Change 2006-2010*. Phnom Penh.
- FAO. (2010a). Cambodia Forestry Outlook Study. *Working Paper No. AP-FSOS / WP / 2010 / 32*: FAO.
- FAO. (2010b). Global Forest Resources Assessment: Main Report. Rome: FAO.
- FCPF. (2011). *Cambodia Readiness Preparation Proposal (P-PP): Country Revision, March 4, 2011*.

- FCPF. (2012). *REDD Readiness Progress Fact Sheet COUNTRY: CAMBODIA October 2012*. <http://www.forestcarbonpartnership.org/sites/fcp/files/Documents/tagged/Cambodia%20FCPF%20REDD%20Readiness%20Progress%20Sheet%20Oct%2019%202012.pdf>
- FCPF. (2013). *Draft REDD Readiness Progress Fact Sheet: Cambodia March 2013*. <http://www.forestcarbonpartnership.org/cambodia>
- Felicani-Robles, F. (2012). Forest Carbon Tenure in Asia Pacific: A comparative analysis of legal trends to define carbon rights in Asia-Pacific. *FAO Legal Papers Online No. 89 2012*. http://www.fao.org/fileadmin/user_upload/legal/docs/lpo89.pdf
- Griscom, B., Shoch, D., Stanley, B., Cortez, R. and Virgilio, N. (2009). Sensitivity of amounts and distribution if tropical forest carbon credits depending on baseline rules. *Environmental Science and Policy*, 12(7), 897-911.
- Hansen, K. K. and Top, N. (2006). Natural Forest Benefits and Economic Analysis of Natural Forest Conservation in Cambodia. *Working Paper 33*. Phnom Penh: Cambodia Development Resource Institute.
- Heng, S. and Scheyvens, H. (2007). Forest governance in Cambodia. In H. Scheyvens, K. Hyakumura & Y. Seki (Eds.), *Decentralization and state - sponsored community forestry in Asia* (pp. 77-98). Hayama: Institute for Global Environmental Strategies.
- Ibarra, E. G., Scheyvens, H., and Lopez-Casero, F. (2012). Community Forest Management and REDD+: Opportunities and Challenges. *Greening Governance in Asia-Pacific: IGES White Paper IV 2012* (pp. 85-114). Hayama: Institute Global Environmental Strategies.
- IGES. (2011). Project Profile: Oddar Meanchey REDD Project. Retrieved from REDD+ Database website: <http://redd-database.iges.or.jp/redd/download/project;jsessionId=6F66C1D0792FB5B73FFEF99CCA247F40?id=62>
- Lao, S. (2012). Cambodia REDD+ Readiness Status / Overview of Roadmap. *Presentation at the National Inception Workshop on REDD+: Building Capacity for Decision Makers and the Way Forward*. 13-14 February 2012. Kuala Lumpur, Malaysia.
- Leng, C. (2011). Forest Cover Monitoring Assessment in Cambodia. *Presentation at TWGF&E meeting*. 31 March, 2011. Phnom Penh: Technical Working Groups on Forestry and Environment.
- MAFF. (2010a). *National Forest Programme 2010-2029*. Phnom Penh.
- MAFF. (2010b). *National Forest Programme Background Document*. Phnom Penh.
- Nguyen, T. Q., Oberndorf, R., Roath, K. S., Brunner, J., Musiol, C. and Kimsreng, K. (2010). Preparing REDD in Viet Nam, Lao PDR and Cambodia: Designing a REDD-compliant Benefit Distribution System. Bangkok: IUCN Asia Regional Office.
- Oberndorf, R. (2010). REDD+ in the Cambodia context: An overview of the policy, legal and governance frameworks impacting implementation. *Report for the Cambodia REDD+ Readiness process*.
- Ra, K., Pichdara, L., Dararath, Y., Jiao, X., and Smith-Hall, C. (2011). Towards understanding household-level forest reliance in Cambodia-study sites, methods, and preliminary findings. *Forest and Landscape Working Papers no. 60-2011*: University of Copenhagen.
- REDD Desk. (n.d.). REDD in Cambodia: Readiness overview. from <http://>

- www.theredddesk.org/countries/cambodia/readiness_overview
- RGC. (2012). *National Report for Rio+20 United Nations Conference on Sustainable Development 2012: The Cambodian Government's Achievements and Future Direction in Sustainable Development*. Phnom Penh: Royal Government of Cambodia.
- Sam, C. (2010). The Inclusion of Indigenous Peoples in REDD Project in Mondulokiri Province, Cambodia. *Report submitted to the Cambodia Assessment Report 2010 supported by Thailand Access Initiative (TAI)*.
- San, S. L. (2006). Indicating Success: Evaluation of Community Protected Areas in Cambodia. In S. Mahanty, J. Fox, M. Nurse, P. Stephen, and L. McLees (Eds.), *Hanging in the Balance: Equity in Community Based Natural Resource Management in Asia* (pp. 14-27). Bangkok: RECOFTC and East-West Center.
- Savet, E. and Sokhun, T. (2003). National forest policy review - Cambodia. *An Overview of Forest Policies* (pp. 93-108). Bangkok: FAO Regional Office for Asia and the Pacific.
- Scheyvens, H. (2012). Papua New Guinea REDD+ Readiness: State of Play-August 2012. *IGES Discussion Paper No. FC-2012-03*. Hayama: Institute for Global Environmental Strategies.
- Scheyvens, H. and Setyarso, A. (2010). Development of a National REDD-Plus System in Indonesia. In H. Scheyvens (Ed.), *Developing National REDD-Plus System: Progress, Challenges and Ways Forward Indonesia and Viet Nam Country Studies* (pp. 15-51). Hayama: Institute for Global Environmental Strategies.
- Stibig, H-j., Stolle, F., Deniis, R. and Feldkötter, C. (2007). Forest Cover Change in Southeast Asia: The Regional Pattern. *JRC Scientific and Technical Research Series: European Commission Joint Research Centre*.
- The NGO Forum on Cambodia. (2011). *Statistical Analysis on Land Dispute Occurring in Cambodia, 2010*. Phnom Penh: The NGO Forum Cambodia.
- UN-REDD Programme. (2011). *National Programme Document - Cambodia: final version, 4 May 2011*. http://www.unredd.net/index.php?option=com_docman&task=doc_view&gid=7388&tmpl=component&format=raw&Itemid=53
- UN-REDD Programme. (2012). *Newsletter Issue # 34, November 2012: Cambodia Takes First Step Toward a National Forest Inventory*. from http://www.un-redd.org/Newsletter34/Cambodia_Forest_Inventory/tabid/106726/Default.aspx
- UNEP-WCMC. (2010). *Carbon, biodiversity and ecosystem services: Cambodia*. Cambridge, United Kingdom: United Nations Environmental Programme World Conservation Monitoring Centre.
- WRI. (2011). *Getting Ready: A Review of the World Bank Forest Carbon Partnership Facility Readiness Preparation Proposals (Cambodia, R-PP)*. http://pdf.wri.org/rpp_country_table_cambodia.pdf
- Yasmi, Y., Kellet, L. and Enters, T. (2010). *Conflict over forests and land in Asia Impacts, causes, and management. Issues Paper*. Bangkok: RECOFTC.
- Zsombor, P. and Kuch, N. (2013, June 19, 2013). *A Troubled Start for Cambodia's Carbon Credits*. *The Cambodia Daily*. Retrieved from <http://www.cambodiadaily.com/archive/a-troubled-start-for-cambodias-carbon-credits-31277/>

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