Readiness Preparation Proposal (R-PP)

for Country: Cambodia

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For use by countries for submitting a
Readiness Preparation Proposal (R-PP)

Forest Carbon Partnership Facility (FCPF)

United Nations REDD Programme (UN-REDD)

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Summary of the R-PP

Dates of R-PP preparation (beginning to submission):	January 2010 – January 2011

Expected duration of R-PP implementation (month/year to month/year):	June/2011 to May/2014
Total budget estimate:	$10,905,000
Anticipated sources of funding:	from FCPF: $3.6 million from UN-REDD: $2.805 million National government contribution: $410,000 UNDP: $950,000 FAO: $400,000 Government of Japan: $2.3 million JICA: $440,000
Expected government signer of R-PP grant request (name, title, affiliation):	H.E. Chheng Kimsun Director General Forestry Administration
Expected key results from the R-PP implementation process:	Outcome 1) Effective National Management of the REDD+ Readiness process and stakeholder engagement in accordance with the consultation principles. Outcome 2) Development of the National REDD+ Strategy and Implementation Framework Outcome 3) Design of Cambodia's Reference Level for REDD+ Outcome 4) Monitoring system designed for REDD+ with capacity for implementation

Executive Summary

Cambodia has one of the highest levels of forest cover in Southeast Asia, with approximately 10.7 million hectares of forest in 2006 or 59% of Cambodia's land area[1]. Based on the FAO 2005 Forest Resources Assessment, Cambodia has the 30th largest area of tropical forest in the world, but is the 13th most forested country by percentage of land area[2]. Cambodia also has a relatively high rate of land-use change with Forestry Administration statistics showing that 379,485 hectares of forest were lost between 2002 and 2005/6[21], a deforestation rate of 0.8% per year. As a consequence Cambodia has been classified as a 'high forest cover, high deforestation' country for the purposes of REDD[3].

Deforestation in Cambodia is caused by the rapid pace of development in the country, including large-scale agro-industrial development, and a lack of effective implementation of existing laws and policies for forest land and forest resource management. The principle forest management strategies of the Royal Government of Cambodia (RGC) are the new National Forest Programme (2010) for the Permanent Forest Estate regulated by the Forestry Administration, Protected Areas managed by the Ministry of Environment, and the flooded forests and mangroves that form part of the fisheries domain regulated by the Fisheries Administration. REDD+ could form a significant new source of finance for effective implementation of these forest management strategies, in a way that explicitly recognizes local livelihood and biodiversity conservation cobenefits. This would help Cambodia to achieve its national target of maintaining 60% forest cover, which is one of the main objectives of the RGC's Rectangular Strategy, which is the over-arching socioeconomic development policy agenda for the Fourth Legislature of the National Assembly (2008-2013) and is a key indicator for the Cambodia Millennium Development Goal 7.

The RGC rapidly started to implement pilot REDD+ projects following the Bali Conference of the Parties in 2007, with the approval of a first REDD+ pilot in the Oddar Meanchey community forests in May 2008, and the Seima Protected Forest REDD+ pilot in 2009. These pilot projects are amongst the most advanced in the Greater Mekong region. In developing these pilots the RGC has made maximizing transparent and equitable local benefit-sharing to communities an explicit policy priority under Council of Ministers Decision #699 that approved the first pilot.

Cambodia submitted its R-PIN to the World Bank Forest Carbon Partnership Facility (FCPF) in late 2008 and was accepted into the FCPF in early 2009. In August, Cambodia applied to join the UN REDD Programme, and was granted observer status in October 2009. Following Cambodia's entrance to UN REDD, the UNDP Cambodia and FAO Cambodia Country Offices committed to support the Royal Government with a REDD Readiness planning process, which led to the development of the Cambodia REDD+ Roadmap ('the Cambodia Readiness Plan Proposal on REDD+)

The Cambodia REDD+ Roadmap was designed based on version 4 of the R-PP template. It was developed by the interim REDD+ Taskforce and stakeholder groups during the period January-September 2010. Following a two-month national consultation process on the Roadmap drafts, the third version was approved by stakeholders in late September 2010. Following international review by the World Resources Institute[4] and the UN REDD Policy Board, and based on the results of further national consultations, the Roadmap was updated in January 2010 (version 4.0). The Cambodia REDD+ Roadmap and the supporting Cambodia REDD+ Background document is available on request. The Roadmap structure is based on the R-PP template and covers the six main components of REDD+ Readiness:

Section 1. Management of National REDD+ Readiness (Component 1a of the R-PP)

Section 2. Consultation, stakeholder engagement and awareness-raising plan (Component 1b and 1c of the R-PP)

[1] Forestry Administration, 2007. Forest Cover Changes in Cambodia, 2002-2006. Paper prepared for the Cambodia Development Cooperation Forum. Forestry Administration, Phnom Penh.

[2] FAO 2005 Forest Resources Assessment. FAO, Rome.

[3] Griscom, B., Shoch, D., Stanley, B., Cortez, R. and Virgilio, N. 2009. Sensitivity of amounts and distribution of tropical forest carbon credits depending on baseline rules. Environmental Science and Policy 12: 897-911.

[4] http://www.wri.org/publication/getting-ready

Section 3. Development and selection of REDD strategies, including the Assessment of Land-use, Forest Policy and Governance[5] (Components 2a and 2b of the R-PP)
Section 4. Implementation framework (including benefit-sharing and safeguards) (Components 2c and 2d of the R-PP)
Section 5. Development of the Reference Scenario against which performance will be measured (Reference Levels or Reference Emissions Levels, RLs/RELs) (Component 3 of the R-PP)
Section 6. Development of the Monitoring System for national Monitoring, Reporting and Verification (MRV) (Component 4 of the R-PP)[6]

The Roadmap planning process was an important achievement for the Royal Government, as it has set a new standard for inter-ministerial cooperation and effective consultation and engagement with local stakeholders. This achievement was due to strong national leadership by the Forestry Administration of the Ministry of Agriculture, Forestry and Fisheries, and the General Department of Administration for Nature Conservation and Protection of the Ministry of Environment.

The Roadmap was used as the basis of a funding request to the UN REDD Global Programme for $3.0 million, which was approved by the UN REDD Policy Board on November 5, 2010. In addition, UNDP, FAO, JICA and the Government of Japan have committed funding for Roadmap activities. Finally, the Roadmap and the material in the Background document have been used to prepare this R-PP funding request. The R-PP components and finance are:

Component 1: Organise and Consult.
Outcome 1: Effective National Management of the REDD+ Readiness process and stakeholder engagement in accordance with the consultation principles established in the R-PP.

Component 1a: National Readiness Management Arrangements. Funded by the FCPF request (**$325,000**), UN REDD ($650,000), Government of Japan ($300,000 for equipment and offices), Cambodian Government agencies ($180,000) and JICA ($40,000). Total: $1,495,000.

Component 1c: Consultation and Participation Process. Funded by the FCPF request (**$300,000**) and UN REDD ($300,000). Total: $600,000

Component 2: Prepare the REDD+ Strategy
Outcome 2: Development of the National REDD+ Strategy and Implementation Framework

Component 2a: Assessment of Land-Use, Forest Policy and Governance in Cambodia. Funded by UN REDD ($20,000) and FAO ($10,000) to update the previous report by FAO. Total: $30,000.

Component 2b: REDD+ Strategy Options. Funded by the FCPF request (**$600,000**), UN REDD ($200,000), UNDP ($400,000 from the Sustainable Forest Management (SFM) GEF project co-financing) and the Government agencies ($90,000). Total: $1,290,000.

Component 2c: REDD+ Implementation Framework. Funded by the FCPF request (**$1,325,000**), UN REDD ($375,000), UNDP ($550,000), JICA ($300,000) and the Government agencies ($50,000). The UNDP funds have been committed for REDD+ pilot projects, and $1,000,000 of the FCPF funds are allocated for capacity-building in two provinces. Total: $2,600,000.

Component 2d: Social and Environmental Impacts. Funded by the FCPF request **($100,000**). This section was based on the Version 4 of the R-PP template, and may needed to be updated prior to the initiation of R-PP funded activities.

[5] This assessment was based on two legal and policy reviews contracted during the Roadmap preparation process:
Broadhead, J. and Izquierdo, R. 2010. Assessment of land-use, forest policy and governance in Cambodia. Report prepared by FAO as a contribution to the Cambodia REDD+ readiness process. FAO-Regional Office for Asia and the Pacific, Bangkok.
Oberndorf, R. and Nhean, M. 2010. REDD+ in the Cambodian context. An overview of the policy, legal and governance Frameworks impacting implementation. Report for the Cambodia REDD+ readiness process.

[6] Sections 5 and 6 of the Roadmap were written based on a report written by Winrock International and with the technical assistance of FAO-Rome. The Winrock report is:
Walker, SM, Casarim, F, Harris, N, and Brown, S. 2010. Cambodia REDD+ Roadmap: Development of a Reference Scenario and Design of a Monitoring System. Winrock International, Washington D.C., USA.

Component 3: Develop a Reference Level.
Outcome 3. Design of Cambodia's Reference Level for REDD+. Funded by the FCPF request (**$150,000**), UN REDD ($300,000) and FAO ($100,000). Total: $550,000.

Component 4: Design a Monitoring System.
Outcome 4) Monitoring system designed for REDD+ with capacity for implementation. Funded by the FCPF request (**$800,000**), UN REDD ($960,000), FAO ($290,000), JICA ($100,000), the Cambodian Government agencies ($90,000) and the Government of Japan ($2,000,000 for equipment and the national forest inventory). Total: $4,240,000.

The full Cambodia Readiness Plan Proposal on REDD+ ('the Roadmap), the Background document, the Background analyses and minutes of all the multi-stakeholder consultations are available.

Acronyms the country uses in the R-PP

ACEI	Spanish Agency for International Cooperation
AFD	Agence Française de Développement
ASEAN	Association of Southeast Asian Nations
C/S Fund	Commune/Sangkat Fund
CALM	Conservation Areas through Landscape Management in the Northern Plains of Cambodia
CCAP	Center for Clean Air Policy
CCBA	Climate, Communities and Biodiversity Alliance
CCCA	Cambodia Climate Change Alliance
CCCSAP	Climate Change Strategy and Action Plan
CDCF	Cambodia Development Cooperation Forum
CIFs	Commune Investment Funds
CDM	Clean Development Mechanism of the Kyoto Protocol
CDPs	Commune Development Plans
CF	Community Forestry
CFi	Community Fisheries
CLUP	Commune Land-use Planning
CMDGs	Cambodia Millennium Development Goals
COP	Conference of the Parties to the UNFCCC
CPA	Community Protected Area
D&D	Decentralisation and Deconcentration
Danida	Danish International Development Agency
DFID	Department for International Development (UK)
EC	European Commission
EIA	Environmental Impact Assessment
ELCs	Economic Land Concessions
ESIA	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
FA	Forestry Administration, MAFF
FCPF	Forest Carbon Partnership Facility
FiA	Fisheries Administration, MAFF
FLEG	Forest Law Enforcement and Governance
FLEGT	Forest Law Enforcement, Governance and Trade
FPIC	Free, Prior and Informed Consent
GDANCP	General Department of Administration for Nature Conservation and Protection, MoE
GEF	Global Environment Facility
GERES	Groupe Energies Renouvelables, Environnement et Solidarités
GHG	Greenhouse Gas
FA	Forestry Administration
FAO	Food and Agriculture Organisation of the United Nations
FiA	Fisheries Administration
FLEG	Forestry, Law Enforcement and Governance
IPCC	Intergovernmental Panel on Climate Change
JICA	Japanese International Cooperation Agency

JMI	Joint Monitoring Indicators
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MoE	Ministry of Environment
MoI	Ministry of Interior
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MRD	Ministry of Rural Development
MRV	Measurement, Reporting and Verification System
NAPA	National Adaptation Programme of Action for Climate Change
NCCC	National Climate Change Committee
NCDD	National Committee for Democratic Development at Sub-national Levels
NPASMP	National Protected Area Strategic Management Plan
NFP	National Forestry Programme
NGO	Non-Governmental Organisation
NSDP	National Strategic Development Plan
NTFP	Non-Timber Forest Product
PA	Protected Area
R-PP	Readiness Preparation Proposal
RECOFTC	Regional Community Forestry Training Center – Center for People and Forests
REL/RL	Reference Emission Level / Reference Level (also called the REDD+ Baseline or Reference Scenario)
RGC	Royal Government of Cambodia
REDD	Reduced Emissions from Avoided Deforestation and forest Degradation
REDD+	REDD, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
SA	Strategic Assessment
SESA	Strategic Environmental and Social Assessment
SIA	Social Impact Assessment
SFM	Sustainable Forest Management
SIDA	Swedish International Development Cooperation Agency
SLCs	Social Land Concessions
tCO_2e	Tonnes of CO2 equivalent (a measure of greenhouse gases)
TGC	Terra Global Capital
ToR	Terms of Reference
TWGs	Technical Working Groups
TWGF&E	Technical Working Group on Forestry and Environment
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNDRIP	United Nations Declaration on Rights Indigenous People
UNEP	United Nations Environment Program
UN-REDD	United Nations REDD Programme
USAID	United States Agency for International Development
WCMC	UNEP World Conservation Monitoring Centre
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

General Principles

The development of Cambodia REDD+ Readiness should...

- first and foremost *build national capacity* within Government institutions and non-Government stakeholders: REDD+ is new and complex and substantial increases in understanding are required before decisions can be made;
- support implementation of *existing policies* and *strategies for management of forest resources* that have been developed over the past 10-15 years;
- be *inclusive* and *balanced*, both between Government agencies and non-Government stakeholders;
- *learn lessons* from previous policy development processes;
- be based on the *existing mandates* of Government institutions, rather than creating new institutions in an already crowded and complex institutional environment;
- make use of *existing coordination mechanisms*, rather than building new fora for discussions;
- seek to provide *predictable* and *substantial finance* for implementation and scaling-up of existing forest management strategies;
- *build awareness*;
- be *consistent* with the international negotiations process;
- be based on *existing REDD+ pilot projects*; and
- recognise the importance of *demonstration* and adopting a *learning-by-doing* approach.

Component 1: Organize and Consult

1a. National Readiness Management Arrangements

Standard 1a the R-PP text needs to meet for this component:
National readiness management arrangements

The cross-cutting nature of the design and workings of the national readiness management arrangements on REDD, in terms of including relevant stakeholders and key government agencies in addition to the forestry department, commitment of other sectors in planning and implementation of REDD+ readiness. Capacity building activities are included in the work plan for each component where significant external technical expertise has been used in the R-PP development process.

Background to National Readiness Management Arrangements[7]

Forest Land Management and REDD+ in Cambodia

Forests in Cambodia fall under the general jurisdiction of the Ministry of Agriculture, Forestry and Fisheries (MAFF), with the Forestry Administration of MAFF charged as the responsible Government Authority (Forestry Law 2002, Article 3), the Ministry of Environment is responsible for Protected Areas, and the Fisheries Administration of MAFF is responsible for flooded forest and mangrove areas (Fisheries Law 2006, Article 3). Cambodian Law is hierarchical, therefore all subsidiary regulations should respect the differentiation of responsibilities laid out in the Forestry Law (and other Laws, see below), i.e. subsidiary regulations cannot amend responsibilities laid out in a Law. As a consequence, management and regulatory jurisdictional authority over forest resources in Cambodia falls under the responsibility of several different government agencies under Cambodian Law (Fisheries Law 2006, Forestry Law 2002, Land Law 2001, Protected Areas Law 2008, Environmental Protection and Natural Resources Management Law 1996, 1993 Royal Decree on Creation and Determination of Nature Reserves, 2009 Subdecree #83 on Registration of Land of Indigenous Communities, etc). These are set out below and are shown in Figure 1 (Oberndorf and Nhean, 2010, Cambodia REDD+ Legal Review):

Forestry Administration, Ministry of Agriculture, Forestry and Fisheries:

Permanent Forest Reserve (State Public Property):

- Production Forests, including Community Forests and Forestry Concessions
- Protection Forests
- Conversion Forests (which can be transferred to *state private property* for other land-uses such as economic or social land concessions)

Private Forests (Private Property), including:

- Privately-owned forests

(The Permanent Forest Reserve and Private Forests together compromise the Permanent Forest Estate)

Ministry of Environment:

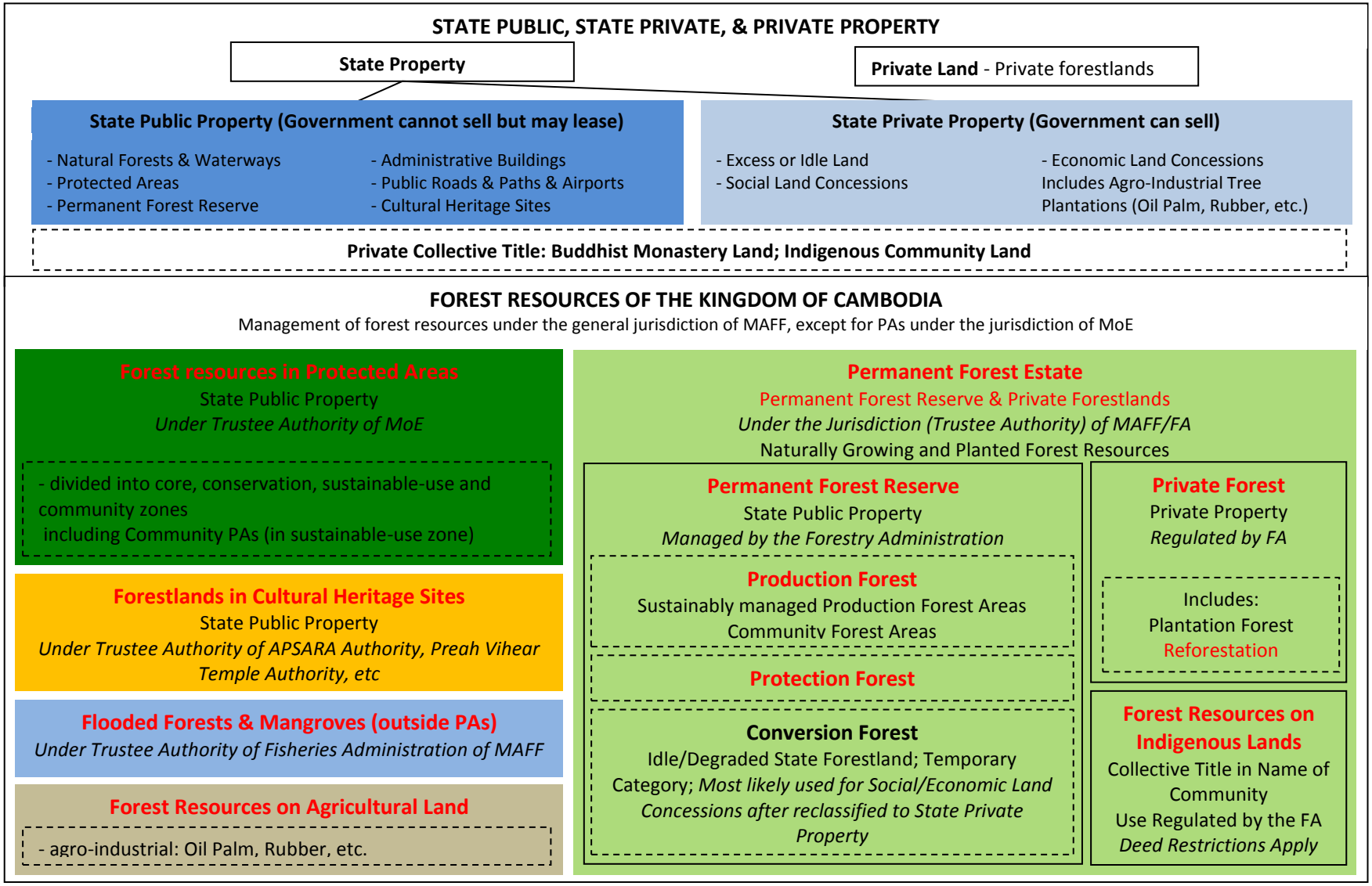
Protected Areas (State Public Property), including:

- Community Protected Areas
- Flooded Forests and Mangroves *inside* Protected Areas[8]

[7] This section is summarized from: Oberndorf, R. and Nhean, M. 2010. REDD+ in the Cambodian context. An overview of the policy, legal and governance Frameworks impacting implementation. Report for the Cambodia REDD+ readiness process. Further legal analysis is given in Annex 2a.

[8] Protected Areas include the core areas of the Tonle Sap Biosphere Reserve but not the sustainable-use or transition zones (Protected Area Law 2008).

Figure 1. Land Classification – Forestland Management in Cambodia



Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries:

Flooded Forests and Mangroves inside fisheries domains (State Public Property) outside *Protected Areas[8], including:*

- Community Fisheries
- Fishing Lots
- Fisheries Protected and Conservation Areas

Apsara Authority and other Temple Authorities:

Forested Areas around temple complexes (State Public Property)

Indigenous Peoples:

Forest Resources within lands of indigenous peoples, registered as collective title (State Public Property)

The relevant management plans are:

- National Forestry Programme (2010) for the Permanent Forest Estate
- National Protected Areas Strategic Management Plan for Protected Areas (to be written)
- Strategic Planning Framework for Fisheries (2010-2019) for fisheries areas, and the 3-year Fishery Development Action Plan

Forest carbon and carbon credit ownership and sale

Most forests in Cambodia are state public property (except for forests under indigenous land title and private forests), therefore most forest carbon is owned by the state. Forest carbon in private forests belongs to the owners.

FA/MAFF is responsible for the Permanent Forest Estate (including management of the Permanent Forest Reserve), GDANCP/MoE for Protected Areas, and FiA/MAFF for flooded forest areas under the Law. The FA, GDANCP and FiA are the state authorities entrusted with forest management, they do not have the right to sell, lease, transfer or otherwise dispose of these state properties without permission from the RGC, unless given specific delegation of authority. Sales of forest carbon are not covered by current legislation, except for 2008 Circular #699 (relating to Oddar Meanchey) and the FA's responsibilities under 2008 Subdecree #188 (see below).

Table 1 provides the approximate estimate of the percentage of Cambodia's forest carbon in each type of forestland management unit, and gives details of the forestland owner, managing agent and regulatory agent. This table is based on an initial assessment by the United Nations Environment Program's World Conservation Monitoring Center (UNEP-WCMC), and the numbers are approximate estimates based on Cambodia data and default values for under-sampled forest types[9].

Table 1. Forest Carbon management in Cambodia[9]

	Forest Classification	% Forest Carbon stock estimate[1]	Land/Forest Owner	Managing Agent	Regulatory Agent
Permanent Forest Estate	Forestry Concessions (Production Forest)	30%	State (State Public Land)	Forestry Concession	FA
	Community Forests (Production Forest)	3% [overlaps with other types]	State (State Public Land)	Forestry Community	FA
	Protection Forests	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	19%	State (State Public Land) or Private	Unclear	FA

[9] Leng, C., Ravilious, C., Kapos, V., Bertzky, M., Osti, M., Clements, T., Dickson, B. (2010) Carbon, biodiversity and ecosystem services: Exploring co-benefits. Cambodia. UNEP-WCMC, Cambridge, UK

	plantations)				
	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	FiA
	Fishing Lots	<1%	State (State Public Land)	Concession holder	FiA
	Other flooded forest areas	<1%	State (State Public Land)	FiA	FiA

Note: the total percentage of forest carbon adds up to approximately 105% due to overlaps between forestland management units. Most of these overlaps are community forests (declared within forest concessions for example) and economic land concessions (declared within forest concessions, protection forests, protected areas, etc.). Data is based on forest management units in 2010 against the 2006 forest cover assessment. Forest carbon stock estimates include aboveground and belowground biomass but not soil carbon.

National Responsibilities with respect to REDD+ (see Annex 2a for more details)

Whilst the legal framework for management of forest resources is clear, the national coordination and regulation framework with respect to REDD+ is not yet fully defined. Nevertheless, the general framework can be determined based on the existing jurisdictions of relevant Government ministries and institutions. Additional processes will need to be established during the national REDD+ Readiness process to clarify decision-making and create appropriate subsidiary regulations.

The Ministry of Economy and Finance (MEF) acts as the executive agency of the RGC in managing state properties (including forest carbon) in terms of selling, leasing, transferring, and other arrangements, and granting of various state concessions or contracts on management of state property. All contracts for sale of forest carbon would therefore have to be approved by the RGC, based on MEF's recommendation.

The National Climate Change Committee (NCCC) is responsible for preparing, coordinating and monitoring implementation of the Royal Government policies, strategies, regulations, plans and programs related to climate change. The NCCC's roles and responsibilities include (2010 Subdecree #99, replacing 2009 Subdecree #174 and 2006 Subdecree #35):

- coordinating and cooperating with concerned ministries and institutions in the preparation of draft policies, strategies, regulations, plans and programs on climate change;
- determining the national negotiation positions and strategies for participation in international negotiations on climate change;
- reviewing and adopting reports to the UNFCCC;
- managing and coordinating the CDM of the Kyoto Protocol; and
- coordinating and monitoring implementation of projects, programs and activities related to climate change.

Therefore, the NCCC's role is primarily focus on coordinating, monitoring and promoting in cooperation with concerned ministries and institutions of the RGC.

Under 2008 Subdecree #188 (amending the 2000 Sub-Decree #17 on the Organisation and Function of MAFF) the Forestry Administration of MAFF's general responsibilities for forest carbon are specifically:

- conducting assessments to determine the quantity of national forest carbon stocks; and
- developing and arranging for forest carbon trades and forest services to increase revenue for effective forest operations and development (Article 4 of 2008 Subdecree #188).

The Forestry Administration therefore currently has authorization to develop forest carbon sales, however based on the law this applies only to the Permanent Forest Estate that lies under the jurisdiction of the FA. Based on the two exclusions in Article 3 of the Forestry Law, management of Protected Areas is under the Ministry of Environment and flooded forest and mangrove areas fall under the jurisdiction of the Fisheries Administration of MAFF.

The FA has additionally been designated as the agent of the RGC for arranging the sale of REDD credits from the Oddar Meanchey REDD+ pilot project, under the Council of Ministers Circular (SaraChor) #699, 26 May 2008. Under Circular #699 final approval for the forest carbon sales remains with the RGC (as the seller of forest carbon). The RGC also decided that revenue from selling the forest carbon from the Oddar Meanchey project should be used to (a) improve the quality of the forest, (b) maximize the benefit flows to local communities who are participating in the project activities, and (c) study potential sites for new forest carbon credit REDD projects. Revenue from the sale of Oddar Meanchey REDD credits will be channeled through the Technical Working Group on Forestry and Environment (TWGF&E) during the first five years.

The Department of Climate Change of GDANCP of MoE acts as the secretariat of the NCCC and has the following relevant roles and responsibilities (see Art. 4 of 2009 Sub-Decree #175 amending 1997 Sub-Decree #57 on MoE Organization and Function):

- developing national strategies, action plans and policies and regulations related to climate changes in cooperation with concerned institutions;
- implementing decisions of the UNFCCC;
- preparing national reports and greenhouse gas inventories for Cambodia under UNFCCC;
- coordinating implementation of CDM and carbon credit projects;
- proposing projects and programs and coordinating, monitoring and evaluating implementation of all projects and programs related to climate change;
- serving as focal point for the UNFCCC, Kyoto Protocol, the CDM, international negotiations on climate change, and preparing the national position for these negotiations;
- serving as secretariat of NCCC;
- cooperating with concerned institutions in the establishment and management of climate change trust funds and carbon credit policies; and
- strengthening cooperation among national institutions, development partners, civil society and the private sector in implementing measures to respond to climate changes as well as for effective implementation of decisions of the UNFCCC.

The Ministry of Land Management, Urban Planning and Construction (MLMUPC) has various responsibilities relating to land management including (1999 Subdecree #62, 2001 Land Law, 2009 Land Policy):

- Cadastral administration of state land (public and private state land) and individuals' private land registration, including indigenous communal land titles; issuing land titles throughout Cambodia;
- Carrying out cadastral surveying and mapping;
- Managing and disseminating all kinds of maps of the Kingdom of Cambodia to national mapping standards by cooperating with relevant institutions which produce sectoral maps; and
- Geographical Information Systems (GIS) coordination.

Interim REDD+ Taskforce

Following initial stakeholder consultations in late 2009 and early 2010, the government agencies created the inter-ministry REDD+ Taskforce in January 2010, with an interim mandate to develop the Cambodia R-PP. The Taskforce is primarily composed of technical officials. It was chaired by the Forestry Administration (FA) of the Ministry of Agriculture, Forestry and Fisheries, and includes the Departments of Wildlife and Biodiversity, Forestry and Community Forestry, and Forest Plantation and Private Forest of the FA, the Departments of Climate Change and National Parks of the General Department for Administration of Nature Conservation and Protection (GDANCP) of the Ministry of Environment and the Ministry of Land Management, Urban Planning and Construction. The Clinton Climate Initiative and RECOFTC (the Regional Community Forestry Training Center) served as civil society representatives on the REDD+ Taskforce. Development partners are represented by WCS and FAO.

Figure 2. National Responsibilities for REDD+ Readiness in Cambodia

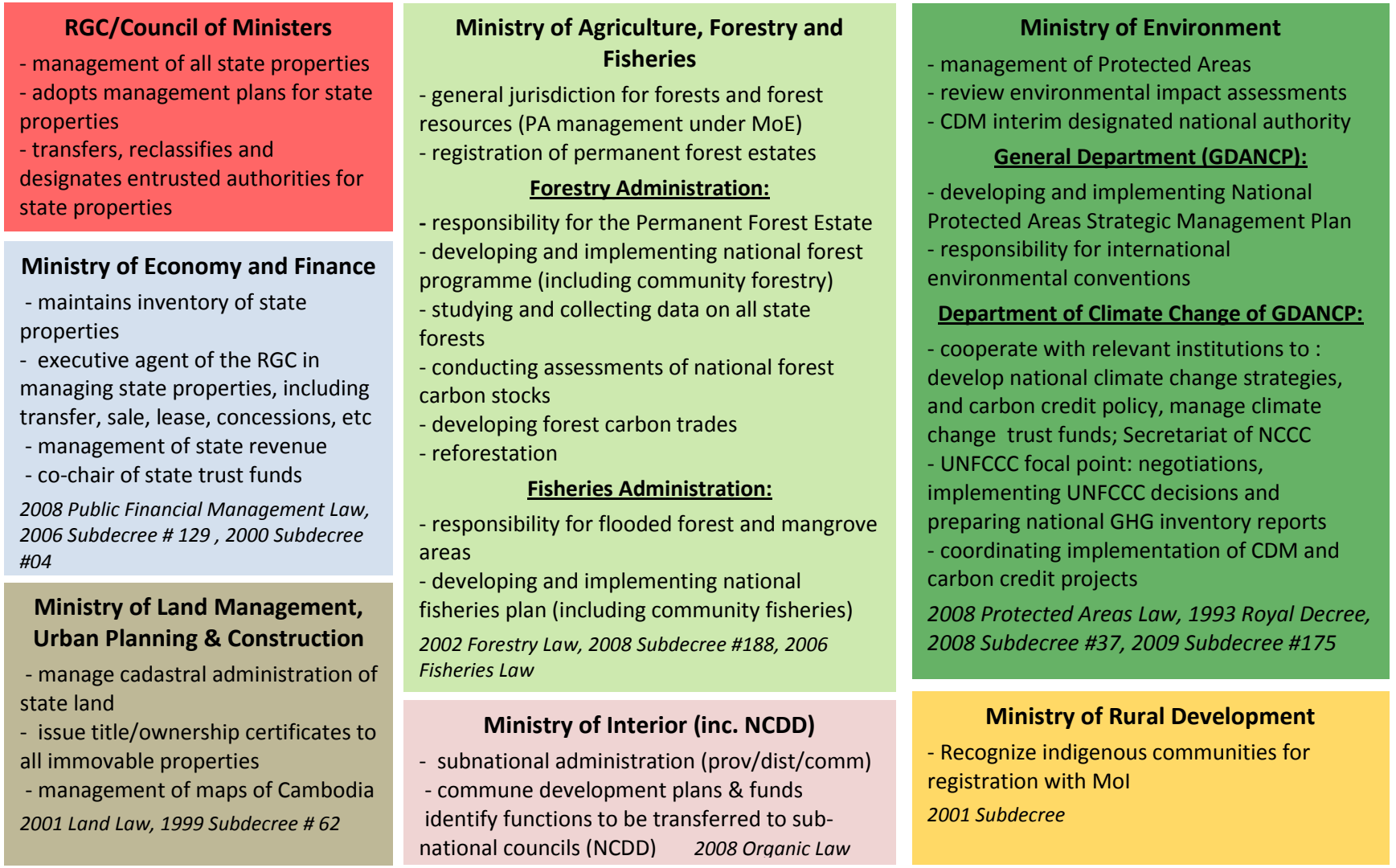


Figure 3. Inter-ministerial bodies relevant for REDD+ Readiness in Cambodia

Council for Land Policy; Cadastral Commission; National Committee for Land Management; National Committee for Addressing Disputes in Relation to Creation of Permanent Forest Reserve Areas; Forest Land Encroachment Committee; National Authority for Land Disputes/Conflict Resolution; National Committee for Subnational Democratic Development (NCDD); Expropriation Committee

National Climate Change Committee
Honorary Chair: Prime Minister, Chair: Minister of Environment,
Deputy Chairs: MAFF, MIME, MOWRAM, MoC;
20 line agency members
Role: to develop, coordinate and monitor the implementation of policies, strategies, regulations, plans and programs of the Royal Government to respond to climate change
Duties: coordinate and cooperate with concerned ministries and institutions in preparation of draft policies, strategies, promote conservation and improvement of carbon sinks, manage and coordinate the CDM of the Kyoto Protocol, adopting reports to UNFCCC

Draft arrangements for Management of REDD+ Readiness

Cambodia REDD+ Taskforce

Based on these considerations, it is proposed that the REDD+ Taskforce's is renewed for three years, with a mandate to manage the initial National REDD+ Readiness process. The Taskforce membership would be revised to include all government agencies with responsibilities for REDD+ Readiness. As a formal government body, non-government members cannot be part of the Taskforce. However, non-government stakeholders may be invited to join Taskforce meetings and can participate through the Advisory and Consultation Groups and Technical Teams (see below).

Table 2. Membership of the Cambodia REDD+ Taskforce

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 UNFF, UNCCD and CITES.
- Fisheries Administration	Management of Flooded Forests & Mangroves inside the fishery domain
- Technical Secretariat for ELCs	Regulation of Economic Land Concessions for industrial agriculture
MoE	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
MEF	Management of State Properties, including sales, transfers, leases, concessions etc. Management of State Revenue, including co-chair of trust funds
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
MoI	NCDD & Subnational administration (including commune development plans & Commune/Sangkat fund)

MRD	Indigenous Peoples policy

The FA serves as the chair and GDANCP serves as the deputy chair of the REDD+ Taskforce. All decisions are made on a consensus basis of FA, GDANCP and FiA, as the agencies responsible for forest land management. All reports of the Taskforce that require signature by the chair will also be initialled by the deputy chair. Both the Chair and the Deputy Chair should nominate their alternates to be present if they are absent. If the Chair is absent the Deputy Chair should fill their function.

Draft Terms of Reference for the Taskforce have been prepared (see Annex 1a).

During the three year period the Taskforce would agree long-term REDD+ management arrangements, which might lead to a policy statement by the RGC if required.

The Taskforce would have a Secretariat, which will be responsible for day-to-day management of the REDD+ Readiness process. The Taskforce Secretariat would have the following membership:

- FA serves as Chair of the secretariat
- GDANCP serves as Vice chair of the secretariat and lead representative of GDANCP responsible for decisions relating to GDANCP
- FA representatives
- GDANCP representatives
- Other line agency representatives as appropriate
- Non-Government Coordinator
- Support staff
- Technical Advisors

Draft Terms of Reference for the Taskforce Secretariat have been prepared (see Annex 1a).

REDD+ Taskforce Technical Teams

The REDD+ Taskforce will establish separate Technical Teams in order to develop technical recommendations on particular key issues. The Technical Teams would be composed of technical officers from different line agencies responsible for the issue under discussion as well as other stakeholders as identified, including civil society and indigenous peoples representatives. Non-government members could be drawn from organisations represented in the Consultation Group (see below). The membership and terms of reference for each Technical Team will be decided by the REDD+ Taskforce. Currently at least four Technical Teams are planned, and more may be required through the Readiness process:

1. REDD+ Projects Technical Team. Composed of FA, GDANCP, FiA, and other line agencies as appropriate, development partner and civil society representatives. Responsible for developing guidelines for REDD+ pilot projects, to ensure that projects are undertaken in a way that allows them to be nested into the national REDD+ system.
2. REDD+ Benefit-sharing and Revenue-distribution Technical Team. Composed of FA, GDANCP, MEF, other line agencies as appropriate, development partner and civil society representatives. Responsible for considering how to manage REDD+ revenues in Cambodia and guidelines for local benefit-sharing arrangements.
3. MRV/REL Technical Team. Composed of FA, GDANCP, FiA, MLMUPC, and other line agencies, development partners and civil society as appropriate. Responsible for implementation of Components 3 and 4a of the R-PP: development of Cambodia's REL(s) and establishment of the MRV system for forest carbon.
4. Consultation and Safeguards Technical Team. Composed of FA, GDANCP and other line agencies, development partners and civil society as appropriate. Responsible for developing the consultation plan (Component 1c), the strategic environmental and social assessment framework (Component 2d), and the Monitoring system for Multiple Benefits, Other Impacts, and Governance (Component 4b).

National Coordination, Reporting and Government-Donor Coordination

REDD+ Taskforce members are responsible for reporting to and consulting with their respective line agencies.

The Taskforce sends reports to National Climate Change Committee, as the main coordination mechanism on climate change. The National Climate Change Committee adopts reports to the UNFCCC, as per Sub-decree No. 99 dated 18 August 2010. The Ministry of Environment is responsible for sending national reports to the UNFCCC

Government-development partner sectoral coordination happens through the TWGs, e.g. TWGF&E is responsible for coordination in the forestry sector, TWGFi for coordination in the fisheries sector, whilst there are currently proposals under discussion to establish a new Government-development partner coordination mechanism for protected areas and climate change issues.

REDD+ Advisory Group

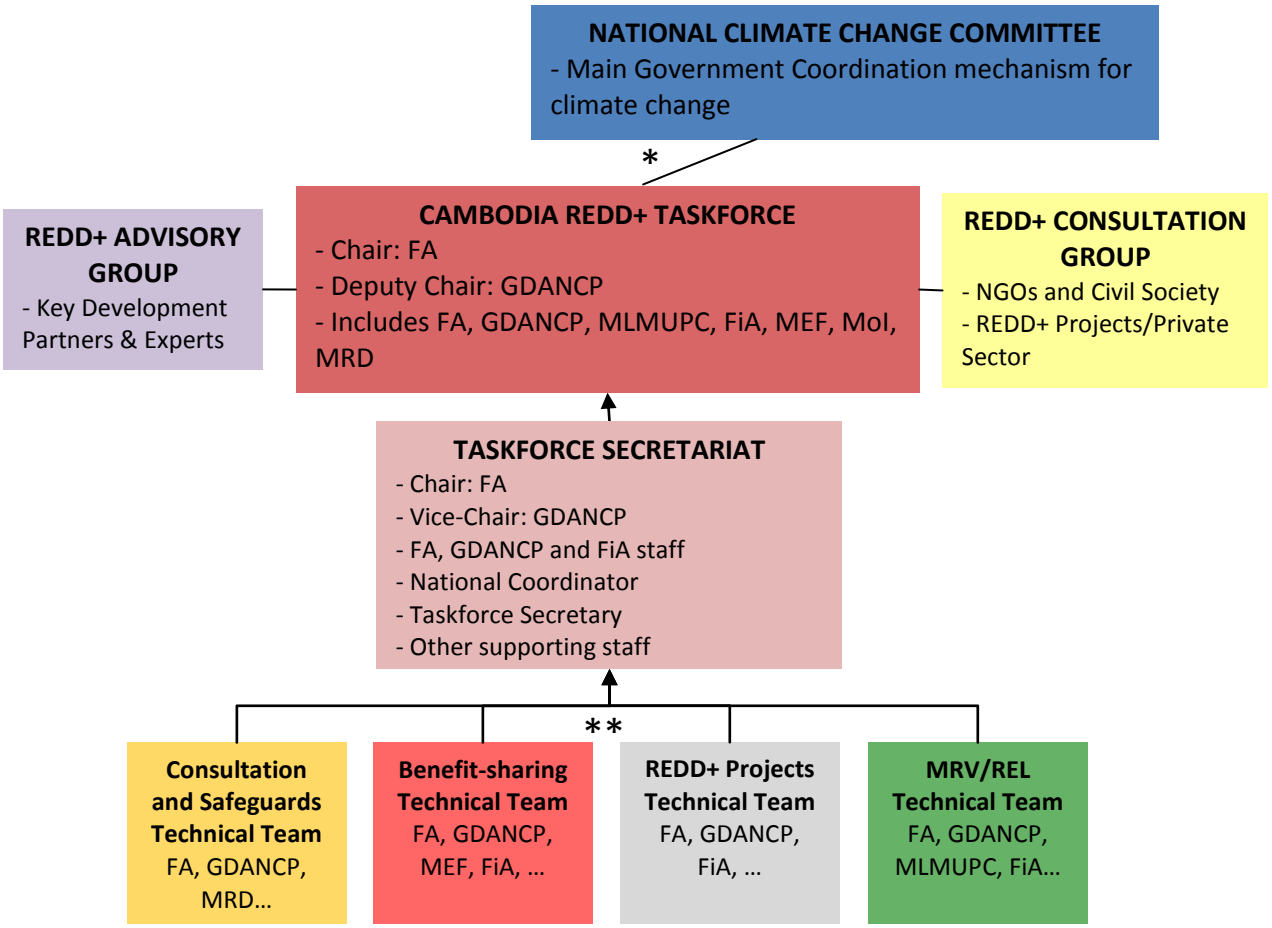
A REDD+ Advisory Group of 4-6 people will be created to advise the Taskforce. Advisory Group members will be representatives of development partners and key experts invited by the Taskforce on an adhoc basis. Advisory Group members join Taskforce meetings and are asked to review the REDD+ Readiness process, draft reports and proposed decisions of the REDD+ Taskforce. New members may be invited by the Taskforce to join the REDD+ Advisory Group as new development partner programs are designed. The REDD+ Advisory Group members are responsible for coordination with other Development Partners and mobilisation of further resources for REDD+ Readiness.

The REDD+ Advisory Group will need to join Taskforce meetings, and comment on minutes of meetings, draft reports and proposed decisions of the REDD+ Taskforce. Advisory Group members would also meet monthly with the Taskforce Secretariat, or more often as required, to discuss the REDD+ Readiness process. Members of the REDD+ Advisory Group, or their representatives, may be invited by the REDD+ Taskforce to join specific Technical Teams (see above) to work more closely with the Government agencies on technical issues. The REDD+ Advisory Group's role will particularly include advising on key issues such as consultation and participation or social and environmental safeguards.

REDD+ Consultation Group

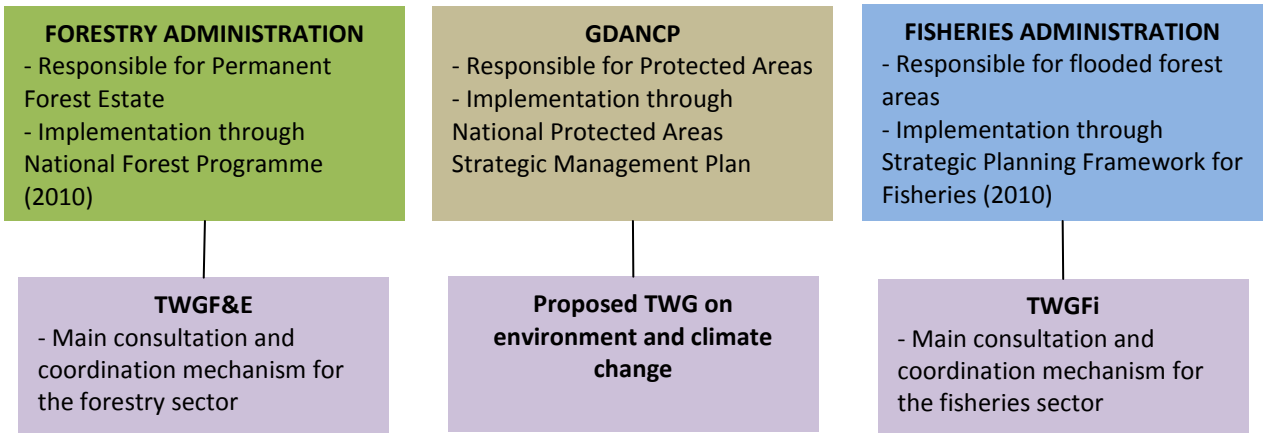
A REDD+ Consultation Group of up to 10 people will be created to represent civil society, indigenous peoples, NGOs, private sector and academic institutions. Taskforce members, the Taskforce Secretariat and Advisors will meet with the Consultation Group on a bi-monthly basis to review progress with and provide comments on the National REDD+ Readiness process. Minutes of these meetings will be taken and circulated widely. The Taskforce will send reports and decisions to the Consultation Group for their comments, and will respond to comments raised. Consultation Group members may also be invited to join Taskforce meetings as appropriate. At least four Consultation Group members should represent indigenous peoples groups and civil society. Other Consultation Group members could include representative(s) from NGO/REDD project developers, private sector, and academic institutions. Some Consultation Group members should be representative of a particular constituency, and may have an interim mandate whilst that constituency is deciding how to elect representatives.

Figure 4. Proposed National Coordination Arrangements



* Represents reports from the Taskforce sent to the NCCC
** Taskforce Technical Teams will include Government and non-Government representatives as appropriate

Figure 5. Proposed Arrangements for Sectoral Implementation and Coordination***



*** Other TWGs would need to be consulted as appropriate for other sectors, e.g. TWG-Lands for issues relating to land management

Table 1a: Summary of National Readiness Management Arrangements Activities and Budget						
Main Activity	**Sub-Activity**	**Estimated Cost (in thousands US$)**				
		2011	**2012**	**2013**	**2014**	**Total**
National REDD+ Readiness Coordination Mechanism established	Establishment of multi-government agency Taskforce responsible for overall management of REDD+ Readiness with approved ToR	$5	$150	$	$	**$155**
	Regular meetings of Cambodia REDD+ Taskforce, dissemination of minutes and reports	$25	$50	$50	$25	**$150**
	Draft National REDD+ management arrangements and/or RGC policy statement	$	$	$	$	**$**
Support to National REDD+ Readiness process	Establishment of Taskforce Secretariat for day-to-day management of Readiness process	$80	$220	$70	$40	**$410**
	Regular meetings of Advisory and Consultation Groups, including meetings with REDD+ Taskforce	$20	$30	$30	$10	**$90**
	Training and Capacity-building to Taskforce, Secretariat and Government Agencies	$20	$30	$30	$10	**$90**
	Hire advisor to the Taskforce to be based in the Taskforce Secretariat	$100	$200	$200	$100	**$600**
Total		**$250**	**$670**	**$370**	**$205**	**$1,495**
Domestic Government		$30	$60	$60	$30	**$180**
FCPF		**$**	**$**	**$160**	**$145**	**$325**
UN-REDD Programme (if applicable)		$210	$300	$140	$	**$650**
Other Development Partner 1 (Government of Japan)		$	$300	$	$	**$300**
Other Development Partner 2 (JICA)		$10	$10	$10	$10	**$40**
Other Development Partner 3 (name)		$	$	$	$	**$**

1b. Information Sharing and Early Dialogue with Key Stakeholder Groups

Standard 1b the R-PP text needs to meet for this component:
Information Sharing and Early Dialogue with Key Stakeholder Groups

The R-PP presents evidence of the government having undertaken an exercise to identify key stakeholders for REDD-plus, and commenced a credible national-scale information sharing and awareness raising campaign for key relevant stakeholders. The campaign's major objective is to establish an early dialogue on the REDD-plus concept and R-PP development process that sets the stage for the later consultation process during the implementation of the R-PP work plan. This effort needs to reach out, to the extent feasible at this stage, to networks and representatives of forest-dependent indigenous peoples and other forest dwellers and forest dependent communities, both at national and local level. The R-PP contains evidence that a reasonably broad range of key stakeholders has been identified, voices of vulnerable groups are beginning to be heard, and that a reasonable amount of time and effort has been invested to raise general awareness of the basic concepts and process of REDD-plus including the SESA.

Note: This section contains information on stakeholders and the consultation and participation process around the development of the R-PP. The information-sharing strategy is included in Component 1c.

Stakeholder mapping and potential roles of stakeholders in REDD+

The development of REDD+ in Cambodia will have impacts on a wide number of stakeholders. A detailed understanding of these stakeholder groups, their interests and how they will be impacted by any potential activities for REDD+ will be important if future mechanisms are to be efficient, effective and equitable. The below information seeks to provide an overview of key stakeholder groups and their importance within the REDD+ process:

- **Government institutions and agencies –** The Government agencies are responsible for policy, regulatory and planning tasks related to establishment and maintenance of the enabling conditions for Roadmap implementation. This includes enforcement of legislation and regulations, conflict resolution, service delivery, and ensuring that necessary capacity and technical assistance are available for development. A key consideration is that the majority of forests are state property, although mechanisms exist for local co-management of forestlands through Community Forestry, Community Protected Area, Protected Area Zonation and Community Fisheries arrangements. A mechanism for REDD+ could provide substantial support to existing and future plans for forest governance in Cambodia. The existing NFP identifies it as a potential funding resource for long term NFP implementation and the levels of funding associated with REDD+ may be the only opportunity to effectively scale up activities such as community forestry to the levels identified in the NFP. Provision of this level of funding is critical if Cambodia's forests are to be secured for the long-term.

  Coordination through and across Government will be critical to the success of REDD+. The capacity of several institutions will also have to be increased if strategies for REDD+ are to be effectively implemented. The establishment of the Cambodia REDD+ Taskforce builds on the positive experience of the interim REDD+ Taskforce used in the development of the R-PP. The Taskforce will look to support across government working and will facilitate interactions between different ministries as well as existing coordination bodies such as the NCCC.

- **Non-Governmental Organisations –** The NGO sector in Cambodia is extensive, often has high capacity, and has established mechanisms for coordination on forestry, community forestry, REDD+ and climate change. Both National and International NGO's have the capacity to provide technical support to Government agencies in the implementation of REDD+ Readiness activities, such as awareness-raising, and REDD+ strategy development. There are several organisations with experience of REDD+ processes internationally and the implementation of pilot REDD+ projects within Cambodia, as well as organisations with considerable experience in community forestry, community-based forest livelihoods, indigenous rights and land. The knowledge and skills of these organisations will be important to the development of National REDD+ strategies.

A culture of upward accountability to development partners combined with the historical and present political context has limited the experience of the NGO sector in linking grassroots civil society with national policy development. Engagement within the NGO sector must thus recognise both the capacity of these organisations and their limitations in terms of representation at local level. Many groups may also have significant vested interests in different national approaches to REDD+.

- **Civil society and Indigenous Groups** – Cambodia has a substantial rural population including 20 different indigenous peoples groups[10]. These communities rely heavily on subsistence agriculture as well as the gathering of non-timber forest products (NTFPs). Although the legal framework on land and forestland tenure and ownership rights is relatively clear, implementation of this framework in rural or forest areas has been limited and local people are vulnerable to relocation for economic development or incursion resulting from migration to forest frontier regions. Given that Cambodia's population is increasing at one of the highest rates in Asia, coupled with rapid economic growth over the past decade, these conflicts are likely to become more prevalent, particularly in remote forest areas where many indigenous groups are found. Development and implementation of a National REDD+ Strategy thus presents a potential opportunity because it should encourage scaling-up of efforts to demarcate and register land boundaries and establish forestland co-management arrangements (such as Community Forestry), in order to determine local beneficiaries responsible for achieving REDD+. However, development and implementation of a National Strategy for REDD+ also presents potential risks if it leads to alienation of forestland resources, and exclusion of the voice and participation of forest-dependent communities.

  The historical, cultural, and political context of Cambodia has resulted in a weak level of civil society organisation at the national level with limited engagement in policy debate and formulation. Organisations that have grown from a grassroots issue base have often struggled to maintain links with their constituents as they have grown. A number of different organisations and networks exist that have the capacity to manage processes of consultation and participation, however support to these organisations must also be managed carefully to allow them to maintain and develop structures of downward accountability.

- **Private Sector –** Cambodia has taken initial steps in engaging the private sector within forest conservation and REDD+. A poor history of private sector engagement within Cambodia's forests however along with an existing trends of natural resource exploitation and degradation means that there remains a long way to go. Successful engagement with the private sector will be critical in both reducing existing rates of deforestation and degradation and supporting future initiatives for REDD+ development.

- **Knowledge Institutions –** Cambodia has several established policy research institutions, such as the Cambodia Development Resource Institute (CDRI) and the Center for Advanced Study (CAS). Major Universities include the Royal University of Phnom Penh, which already has well-regarded master's courses on environmental conservation and provides teaching on Payments for Ecosystem Services, the Royal University of Agriculture (Chamkar Dong) and Prek Leap National School of Agriculture, all in Phnom Penh. Universities could play a key role in implementation of REDD+ through courses on REDD+ and necessary skills such as forest inventories.

- **Development Partners –** Development partners have provided vital support to the development of Cambodia's forest, environment, land and climate change sectors. Several partners have already committed to provide further support to policy dialogue and Roadmap implementation. Development partner experience will play an important role in linking national and international process. It is important that communication between DP's and Government is also clearly maintained to ensure that efforts towards REDD+ are coordinated with other initiatives.

- **International networks –** All of Cambodia's neighbours are currently investigating the potential for national mechanisms for REDD+. Coordination amongst these countries amongst others will provide important lessons.

[10] IPNN (2010) The Rights of Indigenous Peoples in Cambodia. 76th Submission to the UN Committee for the Elimination of Racial Discrimination.

Annex 1b gives examples of the different types of stakeholders.

Background to Consultation Processes and REDD+ awareness in Cambodia

Multi-stakeholder consultation and participation in national policy development remains under constant development in Cambodia[11]. Within the forest sector public consultation on the National Forestry Programme marked an initial step in engaging a wider stakeholder group in sector policy development. A review of the NFP process recognised the significant achievements in bringing different groups together but also that the development of working relationships between different actors and the capacity for these relationships to be fully productive required time to develop[12].

The development of the Cambodia R-PP ('the Cambodia REDD+ Roadmap') by an inter-ministerial Taskforce with civil society members, with dedicated consultation with civil society and indigenous peoples, marked another step in developing these relationships and the capacity of the actors involved. Similar modalities should be maintained through the REDD+ Readiness phase.

The process of consultation and participation in the REDD+ Readiness phase should help to support the building of this capacity and trust further through the development of forums for communication between stakeholder groups (both formal and informal). The process will look to learn from past experience both within Cambodia (the NFP and REDD+ Roadmap processes, as well as REDD+ pilot projects) and from other countries (for instance UN REDD's efforts to develop a process for Free Prior Informed Consent on REDD+) to ensure that the result is a process that is nationally relevant, meets international standards and delivers outcomes that are owned by all relevant stakeholders.

Box 1: Lessons Learned from Past National Consultation Processes

Analysis of previous consultation processes in Cambodia provides some important lessons for the development of a consultation and participation process on REDD+. Lessons include:

- The consultation processes must be well planned and adequately resourced
- Stakeholders should be engaged early – awareness raising and information sharing prior to consultation are critical to gaining effective inputs from all stakeholders
- Information should be provided to stakeholders in a way that is comprehensive and easily comprehensible – document translation, summary documents
- Awareness raising and consultation within and across Government agencies is critical
- Stakeholders and stakeholder representatives at the grassroots level need support to understand, communicate and to respond to the issues they are to be consulted on
- Local or national non-governmental organisations can act as effective intermediaries in consultation both informing and gathering views from stakeholder groups
- Well trained Independent facilitators can improve consultation events
- High levels of transparency improve the effectiveness of and trust in consultation processes with stakeholders this includes clear statements of objectives and work plans, the availability of consultation meeting minutes and clear responses to comments raised during meetings

General understanding of REDD+ and REDD+ Readiness activities is low, as is capacity to implement REDD+ and REDD+ Readiness activities. Overall levels of awareness and capacity will need to be substantially increased before stakeholders can be adequately engaged in the REDD+ Readiness process. Awareness-raising should avoid increasing general expectations that REDD+ revenues will be available soon, or even will be substantial in the longer-term.

[11] Hughes and Un (2007) Cambodia Country Governance Assessment. Governance and Social Development Resource Centre

[12] Fraser Thomas (2009) Joint Appraisal of the National Forest Programme, Cambodia 4-14 August, 2009, Ministry of Foreign Affairs, Denmark

Box 2: Lessons on Consultation and Participation Learned from Oddar Meanchey

The Oddar Meanchey REDD+ Project was officially launched in March 2008. As the first REDD+ project in Cambodia it is at the forefront of REDD+ development and is one of the first locations globally to have gone through a practical process of consultation at the grassroots level. This experience provides important lessons for developing REDD+ consultations in the future.

- Levels of understanding of climate change are very limited amongst local villagers, local and provincial officials and representatives of the police and military
- Utilisation of existing local partners and organisations to conduct awareness raising, facilitation and consultation can be effective
- A high level of resources and time are required to build stakeholder understanding
- Development of a Community Forestry Federation was critical in sharing experiences between communities, maintaining engagement and addressing representation
- Forestry Administration commitment to the project was critical to resolving conflicts between different stakeholders during the development process
- Local groups require legal and technical support to discuss and negotiate elements of a project including details of benefit sharing agreements with project developers – standards for community benefits in projects would help this process

from Bradley, A. (2009) Communities and Carbon: Establishing a Community Forestry REDD+ Project in Cambodia

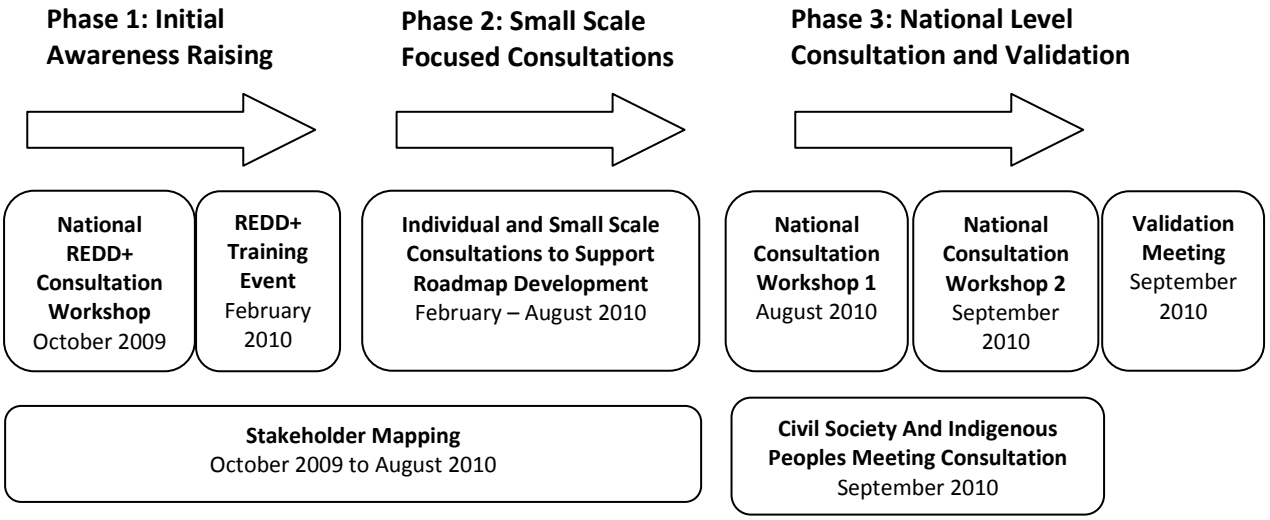
Consultation and Participation Process on the R-PP drafts

The objectives of the Consultation and Participation process during R-PP development were to:

- Undertake a mapping of key stakeholders, and their potential role in REDD+ (see Annex 1b);
- Increase awareness and understanding of REDD+ and the National REDD+ Planning process in Cambodia amongst key stakeholders at national level – in particular within key Government bodies;
- Gain input from key stakeholders within and outside of Government on the content of the Roadmap; and
- Develop a clear understanding of what the next steps are for engaging stakeholders within the REDD+ planning process in Cambodia.

In addressing these objectives the interim REDD+ taskforce has sought to learn from the lessons of past processes. The result has been a flexible process that has used different techniques to raise awareness of and consult on the roadmap. This process can be divided broadly into three phases (shown in Figure 6) which overlap and have progressed at different speeds for different stakeholders.

Figure 6. Cambodia REDD+ Roadmap Consultation and Participation Process



Phase 1: Initial Awareness Raising

Initial awareness raising occurred through two national level workshops in October 2009 and February 2010 (see Box 3) as well as through presentations to the Technical Working Group on Forestry &

Environment (TWGF&E), the main forum for multi-stakeholder consultation on 7 September and 23 December 2009 by the Forestry Administration. The TWGF&E presentations were particularly important to announce the start of the planning process to all stakeholders, including Government agencies, development partners, NGOs and civil society, who are represented on the TWGF&E. In addition, presentations by taskforce members were undertaken at the majority of platforms identified during the stakeholder mapping exercise (see Table 3 below and Annex 1b). This has been followed by more focused individual technical consultations and awareness raising to inform the development of the draft Roadmap. During this phase the Taskforce has worked hard to engage different Government agencies and departments as well as representatives from national and international Civil Society.

Box 3: National Multi-stakeholder Awareness Raising Events

First National Forum on REDD+

The first National Forum on REDD Readiness was held on 14 October 2009 in cooperation with Woods Hole Research Center, USA, with participation from government agencies, development partners, civil society, local and indigenous people. The workshop looked to increase awareness of REDD+ and provide a forum for an open discussion on how Cambodia can engage in REDD+.

National Capacity building workshops on REDD

This event held from the 24th to 26th of February 2010 in cooperation with IGES-RECOFTC-INA looked to:

- increase awareness of REDD+;
- develop a shared knowledge base amongst participants;
- strengthen civil society and Government partnerships; and
- identify capacity constraints for different stakeholders.

The workshop was attended by over 40 participants including Government staff and NGOs with some community representatives, particularly from Oddar Meanchey (one of the REDD+ pilot project sites). One recommendation from the workshop was that stakeholder specific training needed to be carried out to allow for differing levels of understanding and interests.

Presentations to the Technical Working Group on Forestry & Environment (TWGF&E)

The TWGF&E is the principle mechanism for multi-stakeholder coordination in the forestry sector, and meetings are attended by representatives from Government agencies, development partners, NGOs and civil society. Two presentations were made to the TWGF&E during the start of the Roadmap planning process. The first, on 7 September (23rd TWGF&E meeting), outlined progress on REDD+ to date and suggested the importance of starting a national REDD+ Readiness planning process. The second on 23 December (24th TWGF&E meeting), discussed the formation of an interim REDD+ Taskforce to represent key stakeholders and lead on development of the national REDD+ Readiness Plan Proposal. A further presentation was given on the 20 May 2010 (26th TWGF&E meeting) on progress to date.

Table 3. Key Stakeholder Groups engaged through the Roadmap development process

Group	Means of Engagement
Government	REDD+ Taskforce – regular meetings held Internal Government agency review meetings
Donors/ Government / Private Sector / NGO's	Technical Working Group on Forests and Environment Technical Working Group on Agriculture and Water
Donors	Individual Meetings
Private Sector	Individual Meetings
Environmental and Conservation NGO's	Informal NGO REDD Working Group
Climate Change NGO's	Coordination through the National Climate Change Network
Community Forestry groups	National Community Forestry Program Coordination Committee NGO Forum Forestry Network Regional/Provincial/Local networks in areas with REDD projects, such as Oddar Meanchey Community Forestry network
Indigenous peoples and civil society organisations	Representative organisations such as ICSO, IRAM and CIYA Meetings facilitated by NGO Forum Regional/provincial/local networks in areas with REDD projects

Phase 2: Small Scale Focused Consultation

Following the development of a draft document small group sessions were held with key stakeholder groups to inform them of the R-PP's progress and to further raise awareness of key issues within the document. A series of meetings with Civil Society groups were arranged to increase their level of understanding of REDD+ and the REDD+ process in Cambodia. Two short information sharing and discussion meetings on REDD+ and the Roadmap were held with the informal NGO Working Group on 4 March and 7 June 2010. Presentations on overall progress were made at various high-level events, including the Asia-Europe Meeting in Phnom Penh on 6 May 2010.

Initial small consultations were held with key representatives from civil society and indigenous peoples on 13 and 17 August 2010. These meetings were partly facilitated by NGO Forum but were generally focused on grassroots civil society as opposed to national or international NGOs.

Phase 3: National Level Consultation

Two national consultation events were held on 20 August and 10 September 2010. These workshops provided a forum for all stakeholders to discuss of key topics within the R-PP and for the Taskforce to consolidate this feedback. All stakeholders were invited to attend. The workshops were deliberately structured around facilitated group discussions to allow for open debate of key issues. Minutes from the plenary and group discussions were taken and reports from both workshops are available. Based on the results of the first workshop a table of key comments and revisions made to the Roadmap documents was compiled, so that stakeholders could easily see how their comments had been reflected in the drafts. Focus group consultations were also held with different stakeholder groups separately throughout the process, in particular different Government agencies (FA, MoE, FiA, MLMUPC, etc), donors, NGOs, and civil society groups. These focus groups allowed stakeholders to voice their comments frankly and independently.

The R-PP document was circulated by email in English prior to both workshops, and a Khmer version was available for the second national consultation. An email address was specifically created for submission of written comments, and these were also compiled prior to the second national consultation.
At the request of the civil society and indigenous peoples representatives a further 2-day workshop facilitated by NGO Forum and key members from the community networks was held on 2-3 September 2010 in order to gain their input into the R-PP and particularly the development of a consultation and participation plan for the Readiness phase. About 60 participants from community forestry, community networks, indigenous peoples and other grassroots civil society networks attended the meeting. The minutes from the working were taken and a report is available. The results of the meeting were used to develop the consultation and participation plan, which was then discussed again with the civil society group at the second national consultation and during subsequent focus groups.

A technical panel review was convened on 7 September 2010, with key technical participants from Government, donors, NGOs and civil society. The technical panel primarily reviewed the drivers of deforestation and forest degradation analysis, and the selection of the candidate REDD+ strategies (Components 2a and 2b).

Following the second national consultation the R-PP document was revised a second time to reflect comments received. Finally a validation meeting for all stakeholder representatives to approve the document was held on in late September 2010. No objections were voiced at this meeting.

During the consultation process about 60% of the R-PP text was changed, and with very few exceptions all comments received were adopted. In total the consultation process included more than 360 participants from 8 Government line agencies, 11 Donor Agencies, 11 News Agencies, 36 National and International NGOs, Private Sector, 3 Universities, 9 Civil Society or Indigenous Peoples organisations or networks, and Community forestry and Indigenous peoples from 16 provinces. Minutes of all the meetings and tables detailing the changes made in response to comments received are available.

1c. Consultation and Participation Process

Standard 1c the R-PP text needs to meet for this component:
Consultation and Participation Process

Ownership, transparency, and dissemination of the R-PP by the government and relevant stakeholders, and inclusiveness of effective and informed consultation and participation by relevant stakeholders, will be assessed by whether proposals and/ or documentation on the following are included in the R-PP (i) the consultation and participation process for R-PP development thus far (ii) the extent of ownership within government and national stakeholder community; (iii) the Consultation and Participation Plan for the R-PP implementation phase (iv) concerns expressed and recommendations of relevant stakeholders, and a process for their consideration, and/or expressions of their support for the R-PP; (v) and mechanisms for addressing grievances regarding consultation and participation in the REDD-plus process, and for conflict resolution and redress of grievances.

Consultation and Participation Plan

The consultation and participation plan has been developed through a process of consultation and has looked to draw lessons from the experiences of past consultation processes in Cambodia. The plan identifies a number of principles of consultation that should be adhered to through the national process, as well as identifying initial steps within the stakeholder engagement and consultation process. Further development of this plan will occur through the Consultation and Safeguards Technical Team in accordance with national experience and international best practice.

Objectives

The consultation and participation process has two key objectives:

1. Stakeholders are empowered to engage in the National REDD+ Readiness Process through the development of strategies and methods of implementation and the review of proposed policies
2. Stakeholders have access to information on the REDD+ and the National REDD+ Readiness process

Principles

Stakeholders identified the following principles as being important to effective consultation. A number of means to achieve these principles were also recommended:

Table 4. Principles for Stakeholder Consultation and Participation during the R-PP Implementation

Principle	Approach
The process should be **transparent**	• Development of clear workplans and a decision making matrix that illustrates when and by whom decisions should be made available • Publication of minutes of meetings • Clear demarcation of the roles of different groups • Clear monitoring and evaluation frame work
The process should be **inclusive** engaging all relevant stakeholders with a sufficient support to provided to more vulnerable groups	• Representatives from each stakeholder group should be involved in the development of strategies • All stakeholders should have the opportunity to comment on draft policies that will impact their livelihoods • Information should be presented in a way that is both comprehensive and comprehensible to all • Information sharing events focused on gaining both information on existing perceptions and local approaches to forest governance as well as sharing information on REDD+
The process should maintain fair	• Groups should be allowed to select their own representatives

representation of different groups	• Training and support should be provided to representatives
The process should allow for groups to be **held to account**	• Clear idea of the **Role** of different constituents should be presented • **Respect** different positions • Develop **Complaint Mechanism** for consultation process • Develop **Conflict Resolution Mechanisms** where they do not exist
The process should be **iterative**	• Develop **Response Mechanism** • Ensure **Continued Feedback**
The process should ensure the availability of **information**	• Establishment of a REDD+ website • Materials should be developed that are appropriate to different stakeholders, including: glossary of terms in Khmer, Image based awareness raising materials, video information
The process **builds on existing processes** and **structures**	• The process should build on the capacity established by existing processes, organisations and/or networks • Consultation should be integrated into implementation of existing programmes such as the NFP and Community Forestry • Consultation and information sharing should be done by a range of stakeholders within their own constituencies
The process should be **timely**	• It should be sensitive to time needs of various stakeholders • Information should be provided sufficiently in advance for all stakeholders to access information • Stakeholders should be provided with sufficient information and training in advance of consultation
The process should be **adequately resourced**	• Development of clearly costed workplans for activities • Provide funding for grass-roots education and consultation with communities • Provide funding for education and consultation with local governments

These approaches have been adapted to develop a number of next steps and a workplan for the consultation process (see end of section). This information will also form the basis for a more detailed workplan for consultation and participation and a monitoring framework that will be developed by a Technical Team on consultation and participation which will be the first Technical Team to be established.

Stakeholder Coordination

It is important that the key stakeholder groups noted above are consulted through the R-PP implementation. A number of interest forums already exist to facilitate communication with these groups. As such the initial stakeholder mapping has focused on identifying key networks and forums for stakeholder engagement. A summary of these is provided below. Consultations during Roadmap implementation will seek to engage with these fora and utilise existing representatives within the sector to facilitate communication. As such the process will not develop duplicate bodies but will build the capacity of existing structures.

A key issue concerns the selection of representatives from Cambodian civil society. As has been noted, Cambodia has a relatively weak civil society, which tends to be dominated by stronger NGOs. Representation amongst civil society and civil society networks (e.g. indigenous peoples) is also a critical question, since many groups have not yet established processes to determine representatives, and for representatives to feedback information to their constituents. During consultation, civil society groups emphasised the importance of allowing networks to develop at their own pace, and allowing time for groups to consider issues such as how representatives are selected and functions they are to perform. During the initial phases of REDD+ Readiness, interim representatives may need to be selected by civil society groups whilst these matters are still being decided.

Participation of Cambodian civil society members is important if the REDD+ Readiness phase is to be successful and may need to proceed at an appropriate speed. Therefore, the national management arrangements (see Component 1a) and the consultation and participation plan (this Component) have separate processes for civil society as opposed to national and international NGOs.

Table 5. Stakeholder coordination mechanisms under the R-PP

Stakeholder Group	Representative Forum
Government	Cambodia REDD+ Taskforce National Climate Change Committee Council for Land Policy; Cadastral Commission; National Committee for Land Management; National Committee for Addressing Disputes in Relation to Creation of Permanent Forest Reserve Areas; Forest Land Encroachment Committee; National Authority for Land Disputes/Conflict Resolution; National Committee for Subnational Democratic Development (NCDD); Expropriation Committee
Government / Donors / Private Sector / NGOs	Technical Working Groups (e.g. TWGF&E, TWGFi, etc.) REDD+ Advisory Group
Government-Community Forestry Groups	National Community Forestry Programme Coordination Committee
Civil Society and NGOs	National Climate Change Network Informal NGO REDD+ Working Group REDD+ Consultation Group Community forestry and Indigenous peoples networks
Government-Private Sector	Technical Working Groups Possibly: Government-Private Sector Forum Cambodia Timber Industry Association
International Networks	ASEAN Regional Knowledge Network on Climate and Forests Asia Indigenous Peoples Pact

Phase 1: Awareness Raising, Development of Engagement and Capacity for informed participation in decision-making - Next 12 months

- Establish the Cambodia REDD+ Website – this should contain information on REDD+, Climate Change and the National REDD+ Readiness process. Developed by the Taskforce Secretariat – within 3 months.
- Clarification of means of communication between Consultation Group and wider stakeholder groups, and selection of representatives for the Consultation Group from both civil society and NGOs. The Terms of Reference for Consultation Group members should cover the need for representatives to communicate with existing forums. This may include supporting existing civil society networks to select representatives to serve on the Consultation Group, and mechanisms for Consultation Group representatives to feed back to their constituencies. Funds will need to be allocated to support this process. Taskforce and REDD+ Consultation group – initial decisions within three months. It is likely that this process will need to continue over 12 months or longer, as some constituencies may wish to nominate interim representatives to serve for a short initial period, whilst decisions about longer-term representation are being made.
- Initial awareness-raising on REDD+ process through existing national and subnational networks. This should be conducted by existing REDD+ Taskforce members along with stakeholder representatives (potentially led by members of the Consultation Group where appropriate). Basic information sharing materials on Climate Change, REDD+ and National Readiness process already exist to a large extent and should be supplied to allow for groups to pass on information. Materials developed should include media appropriate for local consultation. A detailed plan for awareness raising and consultation should also be developed within this time and can be discussed during awareness raising events. Taskforce Secretariat and Consultation Group – within three months.
- Identification of representatives for the Technical Teams to be established by the Taskforce. It is recommended that this occurs through existing network meetings to prevent duplication of processes. REDD+ Taskforce – within four months.

- Establishment of a National REDD+ Consultation and Safeguards Technical Team to develop detailed work plans for consultation and participation, and social and environmental safeguards. REDD+ Taskforce – within four months.
- Development of core REDD+ communication materials suitable for use with different stakeholder groups. Materials should be based on visual information and should integrate existing efforts on REDD+ into existing national forest management strategies. Taskforce Secretariat – 3-6 months.
- Awareness-raising and training activities to strengthen the capacity of civil society and NGO groups, including forest-dependent communities, to engage in the REDD+ Readiness process. Building the capacity of these groups, and their representatives in the Consultation Group and on the Technical Teams, is important if civil society and NGOs are to become fully engaged in the Readiness process. This work should be led by the Consultation Group members and civil society groups where possible. Taskforce Secretariat and Consultation Group – over 12 months.
- Development of guidelines for consultation on REDD+ demonstration activities within REDD+ project sites. REDD+ Projects Technical Team with assistance from the Consultation and Safeguards Technical Team, in consultation with key stakeholders – within 12 months.
- Regular Update Meetings with key national networks. Taskforce Secretariat – Quarterly with selected networks
- Quarterly update news letter – briefing on national activities on REDD+ and Relevant Activities in Other countries and progress at international negotiations. Taskforce Secretariat
- Initiate awareness-raising in key target areas. Third party groups
- Integration of consultation and participation requirements in line with above principles in Terms of Reference for all studies and activities undertaken under the REDD+ Roadmap. Taskforce Secretariat

Phase 2: Awareness Raising, Consultation and Implementation – after 12 months

- Information-sharing on REDD+ and participants' existing experiences of forest Governance and national strategies for forest management. The process should be held with key stakeholder groups at national and subnational levels and aim to establish the basis for initial communication and awareness-raising on REDD+, with participants being provided with communications materials to share with constituents. The awareness-raising will also aim to identify key issues that should feed into the REDD+ Readiness process. Materials developed should include media appropriate for local consultation. The process should link with existing initiatives on climate change awareness raising such as those under the Cambodia Climate Change Alliance, as well as existing training process such as those developed for community forestry. Consultation and Safeguards Technical Team – next 6 to 12 months.
- Further consultation on the identification of candidate REDD+ strategies (see Component 2a). REDD+ Taskforce, Advisory and Consultation Groups, with the participation of other key stakeholders – next 6 to 12 months.
- Consultation on appropriate environmental and social risks and safeguards. Consultation and Safeguards Technical Team – next 6 to 12 months.
- Assessment of and integration of REDD+ into Community Forestry Training. Taskforce Secretariat and the National Community Forestry Programme Coordination Committee
- Initial localised consultations on first steps of Roadmap following the principles in Table 4. Taskforce Secretariat, Consultation Group and relevant third parties
- Establishment of Multi-stakeholder Technical Teams to address range of issues. REDD+ Taskforce

Phase 3: National Consultation on National REDD+ Strategy as it is developed – after 12 months

- Awareness-raising with national stakeholder groups. REDD+ Taskforce, Advisory and Consultation Groups and relevant third parties
- Consultation on Initial Draft Strategy Framework, including national consultation and validation meetings of drafts for all key stakeholders, in line with the principles in Table 4. REDD+ Taskforce, Advisory and Consultation Groups and relevant third parties
- Consultation on Revised Framework, including national consultation and validation meetings of drafts for all key stakeholders, in line with the principles in Table 4. REDD+ Taskforce, Advisory and Consultation Groups and relevant third parties

- Focus group meetings to review any proposed changes to national policies or legislation, followed by national-level consultations on any revisions in line with the principles in Table 4. REDD+ Taskforce, Advisory and Consultation Groups, and relevant third parties.

Table 1c: Summary of Consultation and Participation Activities and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2011	2012	2013	2014	Total
Stakeholders are engaged in the REDD+ Readiness process	Meetings of Consultation Group, and meetings of Consultation Group with constituent members	$20	$20	$20	$10	**$70**
	Regular consultations with relevant stakeholder groups, including the REDD+ Advisory and Consultation Groups, follow principles listed in Roadmap	$30	$50	$50	$30	**$160**
	Development of a comprehensive national consultation validation process for the National REDD+ Strategy and Implementation Framework	$	$30	$	$	**$30**
	Development of an effective monitoring framework and feedback mechanism on consultation and participation	$	$40	$	$	**$40**
Stakeholders provided with access to information on REDD+ and the National REDD+ process	Establishment of a website for REDD+ where key documents are placed in a timely manner	$20	$30	$	$	**$50**
	Development of a work plan for awareness raising on REDD+ and the national process	$20	$	$	$	**$20**
	Development of effective communication tools on REDD+ integrating it into national context and being appropriate for range of stakeholders	$20	$30	$	$	**$50**
	Implementation of multiphase information sharing and consultation process	$30	$50	$50	$30	**$160**
	Documentation and dissemination of lessons learned from pilot REDD+ projects	$	$10	$10	$	**$20**
Total		**$140**	**$260**	**$130**	**$70**	**$600**
Government		$	$	$	$	**$**
FCPF		**$**	**$100**	**$130**	**$70**	**$300**
UN-REDD Programme (if applicable)		$140	$160	$	$	**$300**
Other Development Partner 1 (name)		$	$	$	$	**$**
Other Development Partner 2 (name)		$	$	$	$	**$**
Other Development Partner 3 (name)		$	$	$	$	**$**

Component 2: Prepare the REDD-plus Strategy

2a. Assessment of Land Use, Forest Law, Policy and Governance

Standard 2a the R-PP text needs to meet for this component:
Assessment of Land Use, Forest Policy, and Governance:

A completed assessment is presented that: identifies major land use trends; assesses direct and indirect deforestation and degradation drivers in the most relevant sectors in the context of REDD; recognizes major land tenure and natural resource rights and relevant governance issues; documents past successes and failures in implementing policies or measures for addressing drivers of deforestation and forest degradation; identifies significant gaps, challenges, and opportunities to address REDD; and sets the stage for development of the country's REDD strategy to directly address key land use change drivers.

Background to Cambodia

Cambodia's history of conflicts and isolation through the 1970s to 1990s resulted in destruction of almost all the areas of national life, including human resources, which are most critical to underpinning the country's socioeconomic development efforts. As a consequence Cambodia is designated as a least developed, low-income country. The restoration of peace and policy stability over the past decade has brought steady economic growth in Cambodia, averaging between 8 and 10 percent since 1998[13], leading to substantial reductions in poverty. The results of the Cambodia Socio-Economic Survey carried out in 2007, shows that the poverty headcount index within parts of the country that were covered by the 1993/94 survey has declined from 39 percent in 1993/94 to 28.0 percent in 2004[14] and to 24.7 percent in 2007[15], and the overall poverty line fell from 34.7 percent to 30.1 percent during 2004-2007, representing a reduction of more than 1 percentage point per year.

Despite this progress, Cambodia still continues to face significant poverty and governance challenges. Cambodia's economy is heavily reliant on export markets and saw a decline in GDP growth following the 2008/09 economic crisis. Unemployment increased while wage rates and demand for land and natural resources fell. Foreign direct investment also fell sharply.

Cambodia has few areas of significant topographic relief, a low population density (approximately 13.4 million people at the 2008 census[16] or 75 people/km^2) and high rural proportion of the total population (85%). Population is projected to increase at 1.7% per annum between 2005 and 2020 (the highest rate in Southeast Asia)[17]. Rural population is, however, expected to rise at below the rate of overall population growth as rural-urban migration takes place. Over 60% of the population are dependent on agriculture and the country is a net rice exporter and generally food self-sufficient[18], although 18% of people were below the food poverty line in 2007[15]. Large proportions of the population are employed in agriculture although shifts in employment towards industry and services are taking place - 78 percent of the population was employed in agriculture in 1990 compared to 60 percent in 2004[19]. Foreign investment in agriculture has expanded rapidly in recent years with the primary cash crop being rubber[18]. At the same time, landlessness has risen steeply and was estimated at 20% in the 2004 Cambodia Socio-Economic Survey. Road networks are increasingly bisecting the country and providing greater access to rural areas and higher paying international markets. Major road building programmes are stimulating economic

[13] National Institute of Statistics, Ministry of the Economy and Finance, National Bank of Cambodia, IMF, World Bank, National Strategic Development Plan Update 2009-2013, World Bank Poverty Assessment.
[14] National Institute of Statistics, Cambodia Socio-Economic Survey 2004.
[15] National Institute of Statistics, Cambodia Socio-Economic Survey 2007.
[16] Cambodia General Population Census 2008. Online at: http://celade.cepal.org/khmnis/census/khm2008/
[17] UN Population Division 2006. World Population Prospects: The 2006 Revision.
[18] GTZ 2009. Foreign Direct Investment in Land in Cambodia. GTZ, Germany.
[19] World Bank World Development Indicators.

development and increasing opportunity costs of land but been criticized for inadequacy of social and environmental safeguards[20].

Forests in Cambodia

Cambodia has one of the highest levels of forest cover in Southeast Asia, with approximately 10.7 million hectares of forest in 2006 or 59% of Cambodia's land area[21]. Based on the FAO 2005 Forest Resources Assessment, Cambodia has the 30th largest area of tropical forest in the world, but is the 13th most forested country by percentage of land area[22]. Cambodia also has a relatively high rate of land-use change with Forestry Administration statistics showing that 379,485 hectares of forest were lost between 2002 and 2005/6[21], a deforestation rate of 0.8% per year. As a consequence Cambodia has been classified as a 'high forest cover, high deforestation' country for the purposes of REDD[23].

Forests play an important role in meeting the subsistence and income needs of many households. Recent research indicates that 41% of rural households in Cambodia derive between 20 to 50% of their total livelihood value from forest use, while 15% of households derive more than half of their total livelihoods from forest use and harvesting[24]. Poor rural households, in particular, are known to have high levels of forest dependence, through the extraction, consumption and sale of non-timber forest products (NTFPs), which may provide a crucial livelihood safety net. While the poor are heavily dependent on forest resources, the potential for forests to continue to generate needed social, economic and environmental services is declining due to the high rate of land-use change.

At a national level, forests play an important role in the Cambodian economy. Although the sector's direct contribution to the economy has declined to following the ban on timber logging concessions), it continues to provide a range of important goods and services to society as a whole. Ecosystem services provided by forests include regulation of water supplies, watershed protection, erosion control, carbon sequestration, ecotourism and maintenance of biodiversity. Continued loss or degradation of forest resources can impact a range of other productive sectors. For example, destruction of flooded forests around the Tonle Sap (and their conversion to rice cultivation) and clearance of mangroves in the coastal zone has a range of immediate negative impacts on fish populations.

All forest resources in Cambodia fall under the general jurisdiction of the Ministry of Agriculture, Forestry and Fisheries (MAFF), though current legislation places direct regulatory and management authority over forest resources that exist within properly designated Protected Areas under the jurisdiction of the Ministry of Environment (MoE), and most flooded forest resources fall under the management of the Fisheries Administration[25].

The Forestry Law (2002) defines the Permanent Forest Estate in Cambodia as being comprised of private forest areas (non-State privately owned land areas with forest resources on them, including forest-lands transferred to local indigenous peoples through indigenous communal land titling and registration procedures) and what is known as the Permanent Forest Reserve. which includes Production Forest areas, Protection Forest areas, and Conversion Forest areas. While private forests[26] fall under the regulatory authority of the Forestry Administration (FA) of MAFF, the Permanent Forest Reserve, which is State Public Land making up around 70% of Cambodia's forest resources, falls under the regulatory *and* management jurisdictional authority of the FA. Conversion forest areas are considered under the law as

[20] AMRC 2006. An Update on the Greater Mekong Subregion Program. Mekong Brief Number 5 December 2006. Australian Mekong Resource Centre. http://www.mekong.es.usyd.edu.au/publications/briefs/mekong_brief5.pdf
[21] Forestry Administration, 2007. Forest Cover Changes in Cambodia, 2002-2006. Paper prepared for the Cambodia Development Cooperation Forum. Forestry Administration, Phnom Penh.
[22] FAO 2005 Forest Resources Assessment. FAO, Rome.
[23] Griscom, B., Shoch, D., Stanley, B., Cortez, R. and Virgilio, N. 2009. Sensitivity of amounts and distribution of tropical forest carbon credits depending on baseline rules. Environmental Science and Policy 12: 897-911.
[24] Heov, K.S et al. 2006.The Value of Forest Resources to Rural Livelihoods in Cambodia. Cambodia Development Research Institute (CDRI) Policy Brief 2, Phnom Penh.
[25] Forestry Law (2002), Land Law (2001), Protected Area Law (Royal Decree 1993, Protected Area Law of 2008), Fisheries Law (2006).
[26] "Forest plantation or trees, whether planted or naturally grown on private land under registration and legal title pursuant to authorized legislation and procedures." Forestry Law (2002), Definition found in Annex.

heavily degraded idle forestlands that have yet to be determined for a non-forestry use, but that can be reclassified by the RGC through Sub-Decree as State private land and used for other development purposes, such as Social-Land Concessions or Economic Land Concessions[27].

The General Department of Administration for Nature Conservation and Protection (GDANCP) of MoE has jurisdictional management and regulatory authority over the 3.1 million hectares of currently designated Protected Areas in the country, which are also classified as State public property. These areas include Community Protected Areas where co-management is decentralized to local communities.

The Fisheries Administration (FiA) of MAFF has jurisdictional management and regulatory authority over flooded forest and mangrove areas outside of the Protected Area network (the fishery domain), including Community Fisheries Areas and Fisheries Protected and Conservation Areas.

In total approximately 40% of Cambodia's forests have some level of protection (Protected Area or Protection Forest).

History of Cambodia's Forests

Until the 1970s, the forests were classified into specific categories for production, conservation, wildlife and research with strong institutional controls. However, it was a system that vanished with the political turmoil during the time of the Khmer Rouge. In the 1990s, a logging concession system was introduced in the country with the aim at raising much needed revenue, and over four years (1994-1997) the RGC granted 36 forest concessions covering 7 million hectares, or close to 70% of the forestlands in the country. Destructive, legal and illegal logging and over-capacity of saw mill facilities, combined with weak enforcement and monitoring, jeopardised attempts towards sustainable management as over-harvesting took place within and outside of the concessions granted[28]. Moreover, the flow of revenue from logging to the government treasury was minimal due to weak governance institutional controls in place at the time.

To reverse the trend of forest degradation, a logging moratorium was introduced in January 2002. An institutional reform was initiated with adoption by the RGC of a forest policy statement in 2002 and enactment by the legislature of a new Forestry Law later that year. The lifting of the logging moratorium was contingent on the preparation and approval of strategic forest concession management plans that included review and approval of environmental and social impact assessments and re-negotiation of the existing concession agreements. While most of the production forestry concession agreements were ultimately cancelled by 2006, all remaining logging concessions, which have been reduced to 3.4 million hectares of the Permanent Forest Reserve, remain at a halt.

Drivers of Deforestation and Forest Degradation

Major direct and indirect drivers of deforestation and forest degradation are listed in Table 6 below.

Deforestation hotspots in Cambodia are located on the edges of the lowland rice-growing zone where the majority of the country's people live, in hilly regions and on good quality 'red' soils that are very productive for agriculture (such as Ratanakiri province) and in areas bordering Lao PDR, Viet Nam and Thailand[29]. Production of rubber, sugar cane and more recently biofuel crops has been a major cause of forest conversion. Land privatisation for cultivation and granting of economic land concessions – mostly for wood, agro-fuel and food production – has been closely related to deforestation and human rights abuses. By 2006, Over 1 million hectares (6% of Cambodia's land area) have been granted as economic land concessions, not counting concessions granted at the province level[30]. A recent study suggests that although forest is generally cleared only 10% of concessions are in active production[18]. Concessions

[27] The designation of areas for use as Social Land Concessions and Economic Land Concessions are considered as primary drivers of current land use change in Cambodia (See Section on Drivers of Deforestation and Forest Degradation below).
[28] ITTO 2005
[29] Stibig, H-J., Stolle, F., Dennis, R. and Feldkötter, C. (2007) Forest Cover Change in Southeast Asia - The Regional Pattern. JRC Scientific and Technical Research series. Office for Official Publications of the European Communities, Luxembourg. ISSN 1018-5593
[30] GTZ 2009. Foreign Direct Investment in Land in Cambodia. GTZ, Germany.

have been granted in forested areas and in former forest concessions contrary to the forestry law and forestry regulations[31].

Table 6. Drivers of Deforestation and Forest Degradation in Cambodia

	Within the forest sector	Outside the forest sector
Direct	• Unsustainable and illegal logging; • Fire* (role disputed); • Unsustainable woodfuel collection**.	• Clearance for agriculture; • Expansion of settlements; • Infrastructure development;
Indirect	• Lack of demarcation of forest areas; • Low institutional capacity and weak policy implementation; • Inadequate forest law enforcement; • Weak forest sector governance – 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 to support sustainable forest management activities by line agencies, local authorities and local communities	• Population increases; • 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 – Weak forestland tenure – tenure is weakest in forests and other areas outside residential or farming zones; – Land grabbing; – 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.

* Fire: the role of fire has been discussed extensively in Cambodia and its role in driving land-use change is unclear. Although use of fire is widespread in Cambodia, e.g. in the deciduous dipterocarp forests in the dry season, this has been practiced for 100s-1000s of years and whether or not the use of fire is sustainable (and can continue at the current extent) is not clear.

** Woodfuel: the contribution of woodfuel burning to overall emissions is unclear, since it depends on the source of the woodfuel (i.e. whether or not the wood would have been burnt anyway), and how sustainable the source is.

[31] UN 2007. Economic land concessions in Cambodia - A human rights perspective. Cambodia Office of the High Commissioner on Human Rights.

Mangroves are found only around Veal Renh and Kompong Som Bays and north of Kas Kong up to the border with Thailand, and only in residual form as narrow, broken strips.[32] In 2010 only 56,000 hectares of mangrove forest remained in Cambodia according to figures submitted to FAO by the Government of Cambodia.[33] Annual rates of mangrove loss exceed that of forest loss in general and have accelerated from 1.6% between 1990 and 2000 to 1.9 percent between 2000 and 2010. Currently only 70% of the mangrove area present in 1990 remains intact.

Social norms have also contributed to deforestation because forest land not currently under management is traditionally seen as an open-access resource that can be claimed by whoever clears the forest. The 2001 Land Law converted possession into ownership in certain cases, but it also restricted legal possession of other lands, most notably state public land, after promulgation of the law[34]. The 2001 Land Law does allow land titling of possession rights but this has been mainly implemented for agricultural and urban areas in Cambodia.

In many forested areas in Cambodia, in-migration is having major impacts on demand for land and resources and is driving deforestation and degradation. In some provinces in-migration has been encouraged in past years with the opportunity for secure land being offered. Migrants generally clear farm land for themselves and may also open forest land to sell on. In recent years, migration has primarily involved demobilized military and others from land poor provinces including Svay Rieng and Takeo.[35] Migrant populations generally have less interest in sustainability and maintaining forest resources for livelihoods benefits and are more interested in financial gain or rapidly securing farmland. Furthermore, because migrants occupy land illegally, discussing land tenure and land-use planning are made more difficult and because migrants often arrive rapidly existing land-use plans can be destabilised. Migrants may also be well-connected to traders other potential in-migrants in other provinces, potentially increasing pressure on land even further.[36]

Migration rates seem to have been falling since 2008, possibly due to the global economic slowdown and resulting reduction in demand.[37] Another reason suggested is the possible belief that no more land is available. In Oddar Meancheay, for example the land situation has become more settled and ELCs, encroachments, established (or proposed) CF areas and areas of forest claimed by villages have stabilised land use change.

Since the logging moratorium and cancellation of logging concessions in 2002, a system has been established to supply domestic wood demand in which annual coupes are auctioned and monitored by the Forestry Administration.[38]

Strengthening implementation of forestry policy and improving forest law enforcement and governance have been priority issues since 1998[39]. A number of obstacles confronting forestry, including illegal activities and land grabbing have, however, remained largely untouched by the technological fixes promoted by donors[40]. Steps taken to control illegal logging after 1998 were unsuccessful and a logging moratorium was announced in 2001. This resulted in closure of mills, a reduction in illegal logging and

[32] Løyche Wilkie, M. and Fortuna, S. 2003. Status and Trends in Mangrove Area Extent Worldwide. FAO, Rome. http://www.fao.org/docrep/007/j1533e/J1533E00.htm
[33] FAO. 2010. Global forest resources assessment 2010. FAO, Rome (also available at www.fao.org/forestry/fra2010)
[34] Adler, D., Porter, D. and Woolcock, M. 2008. Legal Pluralism and Equity: Some Reflections on Land Reform in Cambodia. Justice for the poor, April 2008 Volume 2, Issue 2.
[35] Poffenberger, M. 2009. Forests and climate change: mitigating drivers of deforestation. Community Forestry International.
[36] Pollard, E.H.B. and Evans, T.D. 2008. A survey of communities in and around the Seima biodiversity conservation area in 2008. WCS Cambodia Program, Phnom Penh
[37] Poffenberger, M. 2009. Forests and climate change: mitigating drivers of deforestation. Community Forestry International:
[38] Forestry Administration (2009) Cambodia Forestry Outlook Study. FAO Regional Office for Asia and the Pacific, Bangkok.
[39] Eang, S and Ty, S. 2003. National forest policy review, Cambodia. In: An overview of forest policies in Asia. FAO, Bangkok.
[40] Ken Serey, R. 2009. Key Trends in Forest Policies, Legislation and Institutional Arrangements in Cambodia. FAO/RECOFTC/TNC, unpublished.

also shifts in the focus of illegal logging from commercial to small-scale operators, from few players to many and from export to domestic markets. Key factors determining the future success of forest law enforcement and governance efforts include the degree of responsibility allocated to the Forest Crime Monitoring Unit and the capacity provided to implement direct action[40]. Alternative livelihoods for military groups and greater regulation of harvesting and environmental management are likely to reduce illegal logging although current road network expansion is at the same time liable to expand opportunities. The Royal Government approved the first Anti-corruption Law in April 2010. This established an Anti-Corruption Unit, which has since initiated a number of high profile investigations.

Evidence on the performance of community forestry initiatives to reduce deforestation and forest degradation remains inconclusive. This partly results from the short period since community forestry became formally recognized in Cambodia – community forestry implementing regulations were issued in 2006. When legally registered and approved, however, community forestry "appears to increase local tenure right and reduces the risk that forests will be appropriated by external interests and converted to alternative uses"[41]. While positive effects in some sites have been observed, many sites are still seeking formal recognition and registration. Community forestry currently provides only limited economic benefits due to the degraded condition of allocated forests[41]. Coordination between government and organisations supporting forestry has been mixed and approval processes for community forestry are lengthy. Allocation of economic land concessions within proposed CF sites also poses threats both to forest resources and human rights[41,31].

Protected areas and Protection Forests account for about 4.5 million hectares of the total forest area. Limited capacity and relaxed enforcement at the level means that most protected areas are effectively multiple-use areas. However, the Protected Area Law was not promulgated until 2008 and implementing regulations are yet to be issued, which makes site-level implementation of the law challenging. A long list of threats faces these areas including illegal logging, encroachment, poaching, upland fields (*chamkar*, historically used for shifting cultivation but increasingly also used for permanent cash-crops), infrastructure development and mining. Increased access to forestland resources, which is primarily due to road development, is a major driver behind land encroachment in Protected Areas and Protection Forests. Protected areas are threatened mainly by external commercial interests supplying distant markets and, as such, protected areas adjacent to development zones are especially threatened[42]. The trend may worsen with investments close to protected areas such as roads, dams and electrification schemes without additional attention to resource management, law enforcement and governance capacity. Additionally, encroachment by local communities and commercial interests is reducing the size of protected areas. Some parts of protected areas and protection forests have been degazetted in recent years to provide land for economic land concessions.

Key factors contributing to the pressures affecting protected areas include increasing national and regional demand for timber and inadequate law enforcement combined with a lack of alternative sources of income for local people. Illegal logging and wildlife poaching are the most pervasive threats across the protected area system. At present protected areas lack management plans, objectives and zonation and many have not been demarcated, all of which are mandated by the new 2008 Protected Areas Law. There is also a general lack of financial and human resources at all levels and communication and infrastructure need to be improved. In the region in general, however, and despite many small-scale logging infringements and notwithstanding a number of serious exceptions, destruction within protected areas has been less than that in surrounding landscapes[43]. Increasing cooperation between protected area managers, local communities and other partners and improved communication between protected

[41] Blomley, T. Tola, P., Kosal, M., Dyna, E. and Dubois, M. 2010. Review of Community Forestry and Community Fisheries in Cambodia. Report prepared for the Natural Resource Management and Livelihoods Programme.
[42] Corbett, J. (2008) Paper parks and paper partnerships: lesions for protected areas and biodiversity corridors in the Greater Mekong Subregion. IUCN/ADB Core Environment Program. Unpublished.
[43] ICEM, 2003. Regional Report on Protected Areas and Development. Review of Protected Areas and Development in the Lower Mekong River Region, Indooroopilly, Queensland, Australia. 197 pp.

area staff and national authorities provide some cause for optimism although underlying drivers of change also need to be addressed[44].

Current and future demand for woodfuel (fuelwood and charcoal) is seen as a potential cause of forest degradation and deforestation. Woodfuel provides the primary energy source for most rural and some urban households in Cambodia and is also a major source of energy for some industries. Although domestic use of woodfuel is not usually associated with deforestation, high levels of commercial demand and the lack of alternative energy sources is causing some concern[45,46]. Currently, a significant proportion of commercial woodfuel supply is in the form of wood residues derived from the clearance of old rubber plantations. The brick making and garment manufacturing industries are particularly important users. Annual demand for rubberwood woodfuel from brick and garment factories is 780,000 m3 and 145,000 m^3 per annum respectively, which has been estimated as equivalent to 4,650 hectares of rubber wood plantation per year.

The total area of rubber plantations has increased in recent years from around 51,000 hectares in 1985 to 69,000 hectares in 2001. More recently, 15 of the 25 Economic Land Concessions granted by the Ministry of Agriculture, Fisheries and Forestry between January 2005 and July 2006 were assigned for rubber plantation establishment. Despite high rates of establishment, however, depletion of senescing plantations is likely to result in scarcity of rubberwood in the near future and consumers may turn to natural forest. Isolated incidents of wood from natural forest being loaded into the same trucks which carry rubber wood have been recorded. Annual demand for rubberwood woodfuel from brick and garment factories has been estimated as equivalent to 4,650 hectares of rubber wood plantation per year. However, the future demand situation remains unclear and with rising rubber wood scarcity, surveys of commercial users of woodfuel indicate that many would cease activities when rubber wood resources come to an end while around a third said they would switch to non-wood energy sources such as coal, rice husk and garment waste. Although equivocal in relation to future deforestation and forest degradation, the situation suggests a need to[47]:

- increase woodfuel supply, or at least sustainable supply,
- reduce demand by increasing efficiency of current use or switching to other fuels, or
- continue to use woodfuel while improving access to alternative fuels and protecting valuable forest resources.

Analysis of National Laws and Policies relevant for REDD+

An analysis of national laws and policies relevant for REDD+, and the current regulatory framework for REDD+ is given in Annex 2a. This analysis is based on two reports prepared for the Cambodia REDD+ Readiness process:

Broadhead, J. and Izquierdo, R. 2010. Assessment of land-use, forest policy and governance in Cambodia. Report prepared by FAO as a contribution to the Cambodia REDD+ readiness process. FAO-Regional Office for Asia and the Pacific, Bangkok.

Oberndorf, R. and Nhean, M. 2010. REDD+ in the Cambodian context. An overview of the policy, legal and governance Frameworks impacting implementation. Report for the Cambodia REDD+ readiness process. UNDP Cambodia, Phnom Penh.

Further research on drivers of deforestation and forest degradation

[44] Lacerda, L., Schmitt, K., Cutter P. and Meas, S. 2005. Management Effectiveness Assessment of the System of Protected Areas in Cambodia using WWF's RAPPAM Methodology. Ministry of Environment, Biodiversity and Protected Areas Management Project, Phnom Penh, Cambodia.

[45] Top, N., Mizoue, N., Ito, S., Kai, S., Nakao, T. 2004 Variation in woodfuel consumption patterns in response to forest availability in Kampong Thom Province, Cambodia. Biomass and Bioenergy 27: 57-68.

[46] Top, N., Mizoue, N., Ito, S., Kai, S., Nakao, T., Ty, S. 2006. Re-assessment of woodfuel supply and demand relationships in Kampong Thom Province, Cambodia. Biomass and Bioenergy 30: 134-143.

[47] Baskoro, I., Guidal, A., Roberts, J., Bryan, S., Cuong Lequan, M. 2008. Biomass Baseline Information Study Using Case Studies to Compare Domestic and Regional Demand for Rubber Wood, Rice Husk and Wood Chips. Geres, Cambodia.

The analysis of drivers of deforestation and forest degradation has identified that relatively little is known about the relative contribution of different drivers of forest degradation to current emissions, and their potential future impacts on emissions. Key future activities supported under the R-PP should include:

- Assessing the sources of and contribution of woodfuel use to current and projected future emissions
- Evaluating sources of and options to supply domestic timber demand and improve efficiency of wood and timber use
- Quantitative assessment of drivers of forest degradation
- Consultation on the results of these assessments

For example, one possible strategy to reduce domestic wood energy demand (for fuelwood) is improved cookstoves. Cambodia already has considerable experience at implementing pilot cookstove projects, and sells carbon credits both on the voluntary carbon market and through the CDM. However, much more information is required on the source of fuelwood used in the cookstoves and projected future trends (including fuel switching) in order to understand if the emissions reductions achieved are actually additional.

Analyses of appropriate REDD+ strategies to address the drivers of deforestation and forest degradation are covered under Component 2b, and further legal and policy analysis is covered under Components 2c and 2d.

Table 2a: Summary of Assessment of Land Use, Forest Policy and Governance Activities and Budget (Follow-up Activities Needed)

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2011	2012	2013	2014	Total
Drivers analysis	Assess sources of and contribution of woodfuel use to current and future emissions from deforestation and degradation	$	$10	$	$	**$10**
	Evaluate sources of and options to supply domestic timber demand and improve efficiency of wood and timber use	$	$10	$	$	**$10**
	Revision to the REDD+ Roadmap Assessment of Land-use, Forest Policy and Governance report based on these	$	$10	$	$	**$10**
Total		**$**	**$30**	**$**	**$**	**$30**
Government		$	$	$	$	**$**
FCPF		**$**	**$**	**$**	**$**	**$**
UN-REDD Programme (if applicable)		$	$20	$	$	**$**
Other Development Partner 1 (FAO)		$	$10	$	$	**$**

2b. REDD-plus Strategy Options

Standard 2b the R-PP text needs to meet for this component: REDD strategy Options

The R-PP should include: an alignment of the proposed REDD strategy with the identified drivers of deforestation and forest degradation, and with existing national and sectoral strategies, and a summary of the emerging REDD strategy to the extent known presently, and of proposed analytic work (and, optionally, ToR) for assessment of the various REDD strategy options. This summary should state: how the country proposes to address deforestation and degradation drivers in the design of its REDD strategy; a plan of how to estimate cost and benefits of the emerging REDD strategy, including benefits in terms of rural livelihoods, biodiversity conservation and other developmental aspects; socioeconomic, political and institutional feasibility of the emerging REDD strategy; consideration of environmental and social issues; major potential synergies or inconsistencies of country sector strategies in the forest, agriculture, transport, or other sectors with the envisioned REDD strategy; and a plan of how to assess the risk of domestic leakage of greenhouse benefits. The assessments included in the R-PP eventually should result in an elaboration of a fuller, more complete and adequately vetted REDD strategy over time.

Background to the selection of Cambodia's candidate REDD+ strategies

Current Forest Management Strategies in Cambodia

Development of Cambodia's REDD+ strategy will build on previous experiences and already existing forest management strategies, rather than initiating new policies, legal structures or governance arrangements. Component 1a summarises forest and land management and ownership in the Kingdom of Cambodia. Cambodian Government agencies (FA/MAFF, GDANCP/MoE, FiA/MAFF) already have a long experience of implementing projects to reduce deforestation and protect existing forests in areas under their jurisdiction. Existing policy and legal frameworks and projects (past and present) aimed at helping to implement these frameworks include are described in Component 2a and Annex 2a. These include, but are not limited to the following:

- Protected Areas management, based on the 2008 Protected Areas Law, the 1996 Law on Environmental Protection and Natural Resource Management, the 1993 Royal Decree on Creation and Determination of Nature Reserves and experience with various existing projects (e.g. Samkos, Lomphat, Bokor, Virachey, Kulen Promtep, etc.).
- Protection Forest management, based on the 2002 Forestry Law and Protected Forest subdecrees, and experience with various existing projects (e.g. Seima, Mondulkiri, Cardamoms), including the Seima REDD pilot.
- Community Forestry (CF), the development of which has been supported by the 2000 National Community Forestry Strategic Plan, 2002 National Forestry Policy, provisions in the 2002 Forestry Law allowing for Community Forestry in Production Forest areas, 2003 Sub-Decree on Community Forestry, 2006 Guidelines on Community Forestry, and experience with the many CFs in existence, including the Oddar Meanchey REDD pilot.
- Community Fisheries (CFi), supported by the 2004 Royal Decree on Community Fisheries, 2005 Community Fisheries Sub-Decree and the 2006 Fisheries Law.
- Community Protected Areas (CPAs), based on the draft CPA prakas; most Protected Areas now have one or more CPAs in existence.
- Management of Fishing Lots.
- Fisheries Protected and Conservation Areas.
- Indigenous Land titling (2009 Subdecree #83 on Registration of Land of Indigenous Communities)

Table 7 suggests how these existing management strategies can address the majority of drivers of deforestation from within the forestry sector.

The key plans of the RGC for implementing these strategies are:

- Cambodia's National Forest Programme (NFP, 2010), which is a 20-year the long term national forest management plan for the sector (2010-2030).
- The planned National Protected Areas Strategic Management Plan for the 3.1 million hectares of PAs.

- The Strategic Planning Framework for Fisheries (2010-2019) and the 3-year Fishery Development Action Plan for the fishery domain.

Note: Internationally, the National Forest Programme (NFP) represents a series of holistic socio-political processes that coordinate the policies, planning and field operations in the forest sector. Its development in Cambodia is still at an early stage, and it currently applies only to the mandate of the Forestry Administration of MAFF.

Many areas already have long-term site forest management programs in place which have had some local successes at reducing rates of deforestation and forest degradation, and conserving existing forest carbon stocks. Development of the REDD+ strategy should understand the factors behind the success of these programs, and focus on improving, strengthening and scaling-up these existing approaches.

Drivers from outside the forestry sector

The drivers of deforestation and forest degradation analysis identifies a significant number of drivers from outside the forestry sector that cause large-scale land-use change. These include in-migration to forest areas, agro-industrial developments such as land concessions, poor implementation of land laws and subsidiary regulations, economic incentives promoting forest clearance, poor ESIA regulations, and a lack of state land registration and forest estate demarcation.

Suggesting REDD+ strategies to address these drivers is challenging due to the factors involved. The success of existing site-based forest management programs, despite the substantial pressures from outside the sector, indicates that a bottom-up approach to REDD+ that focuses on site-based efforts may be the most effective REDD+ strategy. Nevertheless possible REDD+ strategies to address these external drivers should be investigated during the REDD+ Readiness phase. Table 8 lists the main drivers and some possible candidate REDD+ strategies that could be investigated further.

Other Considerations

Flexibility and ease of implementation should be maximized at the outset for the initial phases of REDD+ planning, piloting and implementation in order to allow for testing various approaches to REDD+ within the existing frameworks.

Development of Cambodia's REDD+ strategies should learn lessons from existing and future planned pilot REDD+ projects.

REDD+ projects include the involvement of private sector partners. Further work is required to understand how Cambodia's REDD+ strategies could be developed in a way that would incentivise private sector action.

Capacity building and support is required if these laws and policies are to be effectively implemented at scale.

A more detailed understanding of opportunity costs is required in order to assess the impact of potential REDD+ strategies. However, opportunity cost research should be undertaken in a way that assesses costs and benefits to different actors (e.g. local people, government agencies, local authorities, etc.). Gregersen et al. (2010)[48] provide a useful summary of some of the problems with opportunity cost research.

<u>Proposed REDD+ Strategy Options</u>

Based on these considerations, Cambodia's REDD+ Strategy should be implemented through:

1. Effective management of Cambodia's forests, in accordance with existing laws and policies (supporting the NFP, PAs and flooded forest management). The consultation process has identified a number of key implementation strategies to reduce deforestation and forest degradation for the forestry and environment sectors that may require further investigation:
    a. Innovative Financing models, including development of Conservation Concessions as a viable alternative to other types of land concessions

[48] Gregersen, H., El Lakany, H., Karsenty, A. and White, A. 2010. Does the Opportunity Cost Approach Indicate the Real Cost of REDD+? Rights and Realities of Paying for REDD+. Rights and Resources Initiative, CIRAD. http://www.rightsandresources.org/publication_details.php?publicationID=1555

b. Improving Forest Law Enforcement and Governance (FLEG)
c. Local forest protection contracts
d. Valuing forest ecosystem services and promoting REDD+ co-benefits
e. Adopting the nested approach to REDD+ implementation

2. Designing and implementing effective strategies to address drivers from outside the forestry sector. These candidate REDD+ Strategies will need to be investigated further through the REDD+ Readiness phase.

1. Effective management of Cambodia's forests, in accordance with existing laws and policies

The National Forestry Programme (NFP), Nature Protected Areas management and sustainable management of flooded forest resources provide a strong basis to address the main drivers of deforestation and forest degradation from within the forestry sector and forestlands (see Table 7).

For the Permanent Forest Estate, regulated by the FA, development of REDD+ should support implementation of the National Forest Programme (see Annex 2a for a description). Relevant Programmes include:

- Forest Demarcation, Classification and Registration (Programme 1), including demarcation and registration of the Permanent Forest Reserve.
- Forest Resource Management and Conservation (Programme 2), including forest certification, production forest management, establishment of new protection forests, and reforestation/afforestation as alternatives to the currently dormant forest concessions found across Cambodia.
- Forest Law Enforcement and Governance (Programme 3), including potential linkages with the EU Forest Law Enforcement, Governance and Trade (FLEGT) programme.
- Community Forestry Programme (Programme 4), including plans to scale-up Community Forestry and to develop alternative CF models for protection forests, community commercial forestry and partnership forestry.
- Capacity Building and Research (Programme 5), including development of the managerial and technical capacity of FA staff and other stakeholders. Also includes activities on research and awareness-raising activities on sustainable forest management.
- Sustainable Forest Financing (Programme 6), including how to provide an economically sustainable and transparent framework required in meeting all the NFP objectives. This will be achieved through Government financing, income from forestry, donor financing and innovative financing such as REDD+ and PES.

The NFP provides detailed cost estimates for management of forest areas and improvements in overall capacity. However, further work could be done to understand the costs of forest area management, based on experiences from Protection Forest management and development of Community forestry. This could be done through a survey of NGO-funded projects. The FA could be additionally supported to develop a specific REDD+ financing strategy for FA managed areas. Relevant programmes of the NFP could be further elaborated to include the support from REDD+.

For Protected Areas, managed by GDANCP/MoE, the Protected Areas Law (2008) provides an overall framework for PA management, which could be supported by REDD+. However, no subsidiary regulations have yet been issued under this law, although they are mandated by the law. In addition the National Protected Areas Strategic Management Plan (mandated under the PA Law) has yet to be written, and there is no Protected Areas financing plan. GDANCP/MoE could be assisted to develop the National Protected Areas Strategic Management Plan, which would include details of how REDD+ will support strengthened PA management in accordance with the PA law. This could include development of subsidiary regulations mandated by the PA Law, such as the CPA Prakas (currently in draft form), Zoning regulations, and development of the PA Trust Fund. For communities in PAs, it is important to enact the CPA Prakas soon and to develop mechanisms for revenue-sharing from REDD+ to Protected Areas and Community Protected Areas. Effective development of PA Zonation regulations is particularly important for implementation of REDD+. Forests in some parts of the PA system have quite degraded and could be targeted for reforestation or enhancement of forest carbon stocks.

For flooded forests and mangrove areas in the fisheries domain, regulated by the Fisheries Administration, the 2006 Fisheries Law, 2005 Community Fisheries subdecree and 2010-2019 Strategic

Planning Framework for Fisheries describe how areas should be managed, including through community fisheries, fisheries conservation areas and fishing lots. Further work with the Fisheries Administration is required to understand better how REDD+ might support these management strategies.

A critical issue is clarifying management rights of local people over forest areas, through existing modalities such as Community Forestry, Community Protected Areas, Community Fisheries and Indigenous Communal Land Titling. REDD+ would need to support scaling-up of these existing modalities.

In order to support implementation of current laws and policies for the forestry and environment sectors, line agencies (FA, GDANCP and FiA) may be supported to investigate additional aspects such as:

(a) Innovative Financing models: Conservation Concessions could be a powerful new tool to finance sustainable forestry, used to manage and protect large tracts of forest, especially suitable for Cambodia's large areas of post-concession forests or protected areas that require additional funds for long-term management costs. The Conservation Concession model would allow Cambodia to gain funds from preserving natural resources, thereby providing an innovative economically viable alternative to Land Concessions in Cambodia. Conservation Concessions could easily be financed through REDD+. Further work would be required to understand how conservation concessions might work in the Cambodia context, potentially in both the Permanent Forest Reserve and Protected Areas. Another possible innovative financing model that could have linkages with REDD+ is plans by MoE to develop Payments for Ecosystem Services (PES) policies for Protected Areas.

(b) Improving Forest Law Enforcement and Governance (FLEG): A significant driver of forest degradation in Cambodia is logging for timber, much of it illegal. Improving forest law enforcement, governance and controlling illegal timber trade could lead to significant reductions in forest degradation. Improvements in forest law enforcement and governance is Programme 3 of the NFP, and developing forest certification initiatives is included in Programme 2 of the NFP. Initial meetings were held on the Forest Law Enforcement, Governance and Trade (FLEGT) process of the European Union in 2010, and Cambodia is expecting to investigate this further in 2011. There are a large number of overlaps between the REDD+ and FLEGT and these need to be considered through the REDD+ strategy development process. Further activities to strengthen law enforcement could also be considered. PAs could also contribute to FLEG through improvements in protected area law enforcement, protected area zonation and CPAs.

(c) Local Forest Protection Contracts: Very little experience exists in Cambodia for forest protection contracts with local communities, although several pilot programs exist in Vietnam (e.g. payments for watershed protection, reforestation programs, etc.). Cambodia pilots include ecotourism projects (e.g. Tmatboey in Kulen Promtep Wildlife Sanctuary, Preah Vihear province) and other payment programs (e.g. Crocodiles, Cardamoms, Wildlife-Friendly products). There is little understanding as well of how benefit-sharing mechanisms for REDD+ or PES could work in Cambodia, although at least one initial study has been done (Ken Serey Rotha, 2010[49]), and pilot forest protection contract projects could inform decision-making. Existing local forest co-management agreements, such as Community Forests, CPAs, and Community Fisheries could provide an ideal platform for REDD+ benefit-sharing arrangements. Further work is required to understand how these approaches might work in Cambodia, and the Cambodia REDD+ Readiness phase could encourage further pilot projects to inform policy development (see Implementation Framework).

(d) Valuing Forest Ecosystem Services and promoting REDD+ co-benefits: Standing forests have multiple benefits: for the livelihoods of local communities (e.g. harvesting of NTFPs), timber, hydrological processes (e.g. maintenance of watersheds, improving water quality), ecotourism, biodiversity, etc, in addition to climate change mitigation (i.e. REDD+). Documenting and valuing these benefits would help policy-makers to evaluate the trade-offs between maintaining standing forests and conversion to alternative land uses (e.g. through land concessions), beyond REDD+ values alone. In addition, implementation of REDD+ might be expected to lead to deliver significant benefits for biodiversity conservation and local livelihoods (called REDD+ 'co-benefits'), which should be promoted, helping

[49] Ken Serey Rotha, 2010. Considerations in designing a REDD Benefit Distribution System in Cambodia. IUCN Cambodia.

Cambodia to meet its commitments under the Convention on Biological Diversity (CBD). A spatial analysis of some REDD+ co-benefits has already been conducted by UNEP-WCMC[50]. Activities to strengthen the control of illegal wildlife trade through improvements in policy and law enforcement should also be undertaken.

(e) Adopting the nested approach to REDD+ implementation: REDD+ in Cambodia will be implemented using the nested approach, linking subnational action to a national framework. In line with the nested approach, REDD+ may be implemented progressively for forestlands across the country. It should be noted that the UNFCCC negotiations on REDD+ are still underway, and how subnational action is integrated into national REDD+ programmes has yet to be decided.

2. Designing and implementing effective strategies to address drivers from outside the forestry sector.

The drivers of deforestation analysis identifies a number of key factors from outside the forestry sector that cause land-use change in Cambodia. These include in-migration to forest areas, agro-industrial developments such as land concessions, poor implementation of land laws and subsidiary regulations, economic incentives promoting forest clearance, poor ESIA regulations, regional drivers, and a lack of state land registration and forest estate demarcation.

An initial assessment has identified some possible candidate REDD+ strategies that could be investigated further during the REDD+ Readiness phase (see Table 8). These include:

- Reviewing regulations for land concessions, including the planning processes and whether concessionaires could chose to avoid forest clearance under a REDD+ mechanism. The impact of land concessions on overall emissions could also be investigated.
- Developing REDD+ Concessions as an alternative to land concessions, which is covered under Strategy 1(a) above.
- Revisions to ESIA regulations. This is also recommended for the Environmental and Social Management Framework for REDD+ in Component 2d of the R-PP.
- Integrating REDD+ into land-use planning processes at subnational scales.
- Establishing the REDD+ financing mechanism as quickly as possible in order to demonstrate that forests do have value as forests.
- Regional cooperation and coordination with bordering countries, including cooperation on law enforcement and MRV.

These candidate REDD+ Strategies will need to be investigated further through the REDD+ Readiness phase.

Roadmap towards Development of the Cambodia REDD+ Strategy: Key Activities

1. Support to effective management of Cambodia's forests, in accordance with existing laws and policies.

Key activities:

- Research to estimate the financial costs of REDD+ implementation under existing forest management strategies: for Protection Forests, Community Forests, Protected Areas, etc.
- Elaboration of the NFP to provide details on how REDD+ could support implementation of its various programmes.
- Ministry of Environment to be supported to develop the National Protected Areas Strategic Management Plan, as mandated by the 2008 Protected Areas Law, including support from REDD+ to PA management and improved law enforcement. The Ministry could also be supported to develop necessary subsidiary rules and regulations for Protected Areas under the PA Law, including the CPA Prakas and zoning regulations, for effective management of Cambodia's PAs. Reforestation and enhancement of forest carbon stocks in PAs could also be considered, as could development of innovative financing tools.
- Fisheries Administration to develop plans for how REDD+ could support management of flooded forests and mangroves areas outside protected areas, under the 2010 Strategic Planning Framework for Fisheries.

[50] Leng, C., Ravilious, C., Kapos, V., Bertzky, M., Osti, M., Clements, T., Dickson, B. (2010) Carbon, biodiversity and ecosystem services: Exploring co-benefits. Cambodia. UNEP-WCMC, Cambridge, UK

(a) Innovative Financing models:

- Analysis of appropriate legal instruments to implement conservation concessions, both through MAFF and MoE, based on the analysis in the Cambodia REDD+ Legal Review[51].
- Analysis of potential costs and benefits of conservation concessions as an alternative to other land concession models.
- Linkages between REDD+ and other types of PES in Protected Areas by MoE (e.g. hydropower offsets).

(b) Forest Law Enforcement and Governance (FLEG):

- Analysis of possible strategies to manage timber supply and demand detailed in the NFP (e.g. certification, community forests), and their emissions reduction potential
- Analysis of possible strategies to reduce illegal logging and improve law enforcement detailed in the NFP
- Support investigation of FLEGT processes
- Cost-benefit calculations for the different strategies

(c) Local Forest Protection Contracts:

- Understanding local costs and benefits of REDD+ in order to determine payment levels.
- Pilot forest protection contracts projects

(d) Valuing forest ecosystem services and promoting REDD+ co-benefits:

- Valuing the multiple benefits of standing forests, including REDD+, contributions to local livelihoods, timber, biodiversity, ecotourism and hydrological services.
- Understanding how implementation of REDD+ can promote co-benefits, especially for local people and biodiversity conservation.
- Activities to strengthen wildlife policy and law enforcement.

(e) Adopting the nested approach to REDD+ implementation:

- Understanding how to link subnational projects to the national REDD+ framework.
- Development of guidelines for demonstration activities by the Technical Team on REDD+ Projects, informed by the lessons learned from existing REDD+ projects.

2. Designing and implementing strategies to address drivers from outside the forestry sector.

Key activities:

- Review of possible candidate REDD+ strategies to address drivers from outside the forestry sector
- Developing REDD+ Concession models as an alternative to land concessions (see 1(d) above)
- Reviewing regulations for Land Concessions
- Reviewing ESIA requirements
- Regional collaboration with bordering countries in order to reduce leakage and improve law enforcement

Evaluation of proposed REDD+ strategies

Evaluating proposed REDD+ strategies:

- Evaluation of costs and benefits: Scoping of REDD+ strategies will be undertaken in relation to the costs and benefits considering, *inter alia*: carbon density; co-benefits: biodiversity and local livelihoods; jurisdiction; opportunity costs, investment costs, transaction costs, and abatement costs; resource management issues, etc.
- Identification of potential synergies and conflicts between the proposed strategies.
- Linkages with drivers of deforestation and governance issues identified (see Tables 7 and 8)
- Consideration of ways of mitigating conflicts or modifying the options to compensate affected institutions and stakeholder groups.

[51] Oberndorf, R. and Nhean, M. 2010. REDD+ in the Cambodian context. An overview of the policy, legal and governance Frameworks impacting implementation. Report for the Cambodia REDD+ readiness process.

During the evaluation of the candidate REDD+ strategies key environmental and social issues will be considered in order to (a) enhance the formulation of the strategies, and (b) applying safeguards. This strategic assessment is part of a process called Strategic Environmental and Social Assessment (SESA), defined as "A range of analytical and participatory approaches that aim to integrate environmental and social considerations into policies, plans and programs and evaluate the inter linkages with economic, political, and institutional considerations". SESA can be described as a family of approaches which use a variety of tools, rather than a single, fixed, prescriptive approach. Another component of the SESA is the Environmental and Social Management Framework (ESMF), which is included in the Roadmap Component 4. SESA is a requirement for receiving World Bank Forest Carbon Partnership Facility (FCPF) funds.

(a) *Enhancing preparation of the REDD+ strategy:* Based on the identification of key environmental and social considerations associated with the drivers of deforestation and forest degradation, environmental and social priorities will be selected in a participatory way. Then, an assessment of legal, institutional, regulatory, and capacity gaps to manage these priorities should be undertaken. The results of the gaps assessment should inform the preparation of recommendations to address these gaps that should feed into the selection and/or formulation of the REDD-plus strategy options.

(b) *Applying environmental and social safeguards:* The candidate REDD+ strategies will need to be evaluated against the environmental and social safeguards developed under the Environmental and Social Management Framework (ESMF, see Roadmap Section 4) by the REDD+ Taskforce and the Consultation and Safeguards Technical Team. In the case of World Bank funding, the World Bank safeguards will also apply.

<u>REDD+ Demonstration activities</u>

REDD+ Demonstration Activities can include:

- REDD+ projects developed for the Voluntary Carbon Market. Existing Cambodia examples include the Oddar Meanchey Community Forestry REDD project (FA/PACT/TGC/CFI) and the Seima Protection Forest REDD project (FA/WCS).
- Other REDD+ demonstration activities, such as awareness-raising, research, development of baselines for particular sites, and so on. These activities could be linked in to development of subnational REDD+ systems linked into the national REDD+ program.

For REDD+ demonstration activities it is important to clarify tenure over forestlands through the development of the project. This isn't a necessary pre-condition for starting a project, but clear agreements over tenure and forest carbon ownership should be developed through the project. Sites that already have started to establish local agreements over forestland tenure will therefore be more suitable for demonstrations of REDD+.

All REDD+ demonstration activities should build on existing forest or site conservation projects, rather than create new initiatives.

All pilot projects for the voluntary carbon market and REDD+ demonstration activities should be approved by the respective Government agency responsible.

The Forestry Administration prioritises existing pilot projects for the voluntary carbon market for completion before any other demonstration activities. GDANCP priorities having 1-2 pilot projects in Protected Areas, and pilot projects should include thinking about how REDD+ can work with CPAs and the PA zoning system

Lessons from pilot projects and demonstration activities should be compiled, in order to improve subsequent implementation and reduce costs.

All pilot projects and demonstration activities should aim to build national and subnational capacity, especially in the Government line agencies responsible, NGOs and civil society groups and forest-dependent communities. Pilot projects for the voluntary carbon market and demonstration activities should follow the national guidelines to be established by the REDD+ Taskforce through the Technical Team on REDD+ Projects. Development of these guidelines should be informed by the existing REDD+ projects.

Table 7. Drivers and strategies: within forestlands

	Drivers within forestlands	Candidate REDD+ Strategies
Direct	• Unsustainable logging • Unsustainable woodfuel collection (role unclear) • Fire (role unclear)	These drivers are largely addressed through Cambodia's existing forest management strategies, all of which include tenure reform and local co-management. Implementation of these strategies is however hindered by the lack of available finance, which could be met by REDD+. **1. The National Forest Programme** (2010). The NFP identities 9 objectives and 6 operational programmes for management of the Permanent Forest Estate and overall regulation of the forestry sector, including forest law enforcement and governance (FLEG), community forests, sustainable forest management, protection forests, improving capacity and demarcation. The NFP is linked to 5-year plans. **2. Protected Areas** cover c.3 million hectares of forests and the main management strategy is the National Protected Area Strategic Management Plan (to be developed). **3. Flooded forests and mangroves** are managed by the Fisheries Administration, according to the Fisheries Law and Strategic Planning Framework on Fisheries (SPFF) **4. Other Possible Strategies** - local forest protection contracts - conservation concessions
Indirect	• Low institutional capacity and weak policy implementation; • Inadequate forest law enforcement; • Weak forest sector governance – Low levels of stakeholder participation and involvement; – Lack of transparency and accountability; – Lack of assessment of social and environmental impacts • Lack of forest demarcation; • 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 to support sustainable forest management activities by line agencies, local authorities and local communities	

Roadmap Activities

Further research on drivers
- Assess sources of and contribution of woodfuel use to current and future emissions from forest degradation
- Evaluate sources of and options to supply domestic timber demand and improve efficiency of wood and timber use
- Quantitative assessment of drivers of forest degradation
- Research and consultation on the list of drivers identified

Research on Strategies
- Valuation of the multiple benefits of forests;
- Scoping of REDD+ strategies in relation to costs and benefits considering, *inter alia*, carbon density, co-benefits, jurisdiction, opportunity costs, resource management issues, etc.
- Understanding local costs and benefits of REDD+
- Consultation on what additional REDD+ strategies might be required that are not covered by NFP, PAs and SPFF

Candidate REDD+ Strategies Development

1. Development of REDD+ to support NFP (by FA): Forest area management cost estimates for FA managed areas; Elaboration of relevant programmes of the NFP; Investigating FLEGT processes; Improving FLEG; Investigation of Conservation Concessions; Capacity-building

2. Development of REDD+ to support PAs (by GDANCP): Development of National Protected Area Strategic Management Plan and PA Business/Financing Plan (including REDD+); Development of PA zoning regulations and CPAs; Consideration of potential for reforestation within PAs; Investigation of other innovative financing models (including PES); Identifying synergies between REDD+ and the implementation of the CBD in Cambodia; Capacity-building

3. Development of REDD+ to support fisheries areas (by FiA): Consideration of integration of REDD+ and flooded forests and mangrove areas managed by Fisheries Administration under the Strategic Planning Framework on Fisheries

4. Development of other strategies: Assessments of local forest protection contracts; Conservation Concessions as alternative to land concessions; Understanding the nested approach; Promoting REDD+ co-benefits.

Development of National REDD+ Strategy

- Revision of the REDD+ Roadmap Assessment of Land-use, Forest Policy and Governance report

- Selection of REDD+ strategies and decisions over prioritisation and resource allocation

- Detailed REDD+ strategies and cost implementation estimates

Table 8. Drivers and strategies: national

	National-level drivers	Candidate REDD+ Strategies
Agriculture, population and infrastructure development	• Clearance for agriculture; • Low agricultural yields; • Expansion of settlements; • Population increases; • Migration into forest areas; • Social norms (claiming land through utilisation); • Infrastructure development; • Increasing accessibility of forest areas; • Large-scale agri-industrial development (ELCs and SLCs); • Regional demand for resources;	- Promote agricultural intensification in existing large farming landscapes; - Redirect agricultural development to degraded areas with low carbon and co-benefit values; - Remove policies that promote agricultural extensification; - Implement laws relating to large-scale development, including ELC contracts and the requirements for EIAs - Review procedures for allocating Land Concession in relation to impacts on deforestation and degradation. - Consult on land-use planning decisions
Governance	• Overlapping/unclear jurisdictions; • Weak forestland tenure – tenure is weakest in forests and other areas outside residential or farming areas; • Weak enforcement of the law; • Lack of a fair and transparent conflict resolution mechanism; • Land speculation; • Insufficient implementation of land-use planning; • Poor ESIA regulations and lack of implementation	- Support harmonisation of legislation and policy across sectors and levels of government - Demarcate Permanent Forest Estate and PAs, including CFs and CPAs - Implement the Land Policy and related legislation, including indigenous communal land title - Improve conflict resolution mechanisms; - Improve land use coordination. - Train judges and prosecutors in forest and forest-related laws - Support transparency, consultation and ESIAs for development in forest areas
Economics	• Low economic benefits provided by forests at the national level in comparison with alternatives • Opportunity costs of sustainable management of forests at the local level • Low awareness of environmental roles of forests.	- Establish REDD+ financing mechanism to promote economic values of forests - Awareness-raising on REDD+

Roadmap Activities

Agriculture
- Review existing agricultural development policies and programs and determine conflicts and synergies
- Review synergies with existing donor agricultural intensification programs

Land Concessions & infrastructure development
- Develop REDD+ Concession modalities as an alternative to land concessions
- Review how processes of planning and establishing concessions and infrastructure could be improved, including possible set-asides
- Understand potential contribution of concessions to carbon sinks and forest carbon stock enhancement
- Review impact of concessions on emissions

Land-use Planning & Land registration
- Develop methodologies for rapid demarcation and registration of forestlands (for NFP and PAs, including CFs and CPAs)
- Linkages to land-use planning at national and subnational levels (provincial, district, commune)

EIA & ESIA
- Review current ESIA requirements and develop recommendations for improving implementation

Regional Cooperation
- Regional cooperation with bordering countries

Change economic incentives: develop REDD+
- Develop detailed estimates of potential REDD+ benefits and other environmental services from forests

Development of National REDD+ Strategy

- Selection of REDD+ strategies and decisions over prioritisation and resource allocation

Overall drivers of change are taken to be rising demand for land and resources by a growing and increasingly wealthy population in a country that is becoming more integrated into global markets

Table 2b: Summary of Strategy Activities and Budget						
Main Activity	**Sub-Activity**	**Estimated Cost (in thousands)**				
		2011	**2012**	**2013**	**2014**	**Total**
Development of individual REDD+ strategies	FA sub-component (details above)	$85	$210	$35	$	**$330**
	MoE sub-component (details above)	$85	$210	$35	$	**$330**
	FiA sub-component (details above)	$55	$60	$	$	**$115**
	Valuation of multiple benefits of forests; Promotion of co-benefits	$50	$100	$50	$	**$200**
	Designing and implementing strategies to address drivers from outside the forestry sector	$	$80	$30	$	**$110**
Evaluation of candidate REDD+ strategies	Cost-benefit analysis; identification of synergies and conflicts; conflict mitigation measures	$	$50	$	$	**$50**
	SESA of the candidate REDD+ strategies	$	$25	$25	$	**$50**
Development of National REDD+ Strategy		$	$	$105	$	**$105**
Total		**$275**	**$735**	**$280**	**$**	**$1290**
Government		$25	$35	$30	$	**$90**
FCPF		**$**	**$350**	**$250**	**$**	**$600**
UN-REDD Programme (if applicable)		$100	$100	$	$	**$200**
Other Development Partner 1 (UNDP)		$150	$250	$	$	**$400**
Other Development Partner 2 (name)		$	$	$	$	**$**
Other Development Partner 3 (name)		$	$	$	$	**$**

2c. REDD-plus Implementation Framework

Standard 2c the R-PP text needs to meet for this component:
REDD implementation framework:

Describes activities (and optionally provides ToR in an annex) and a work plan to further elaborate institutional arrangements and issues relevant to REDD-plus in the country setting. Identifies key issues involved in REDD-plus implementation, and explores potential arrangements to address them; offers a work plan that seems likely to allow their full evaluation and adequate incorporation into the eventual Readiness Package. Key issues are likely to include: assessing land ownership and carbon rights for potential REDD-plus strategy activities and lands; addressing key governance concerns related to REDD-plus; and institutional arrangements needed to engage in and track REDD-plus activities and transactions.

Draft Implementation Framework for Cambodia

Cambodia's REDD+ Strategy will be implemented through:

A. National Framework for REDD+
B. Subnational implementation by line agencies, according to their jurisdiction, based on the national REDD+ strategy

Cambodia's REDD+ Implementation Framework needs to recognise the different roles and responsibilities of the various government authorities that have jurisdictional authority over forest resources in the country (see Component 1a, 2a and Annex 2a). Implementation of REDD+ is therefore expected to follow Government agency jurisdictions, with different Government agencies developing REDD+ implementation strategies for the different forest areas, based on the existing laws and policies of the RGC. Implementation will have to be nested within a National Framework, because REDD+ requires implementation at the National scale, with National-level reporting to the UNFCCC.

A. National Framework for REDD+

Over the next two years (2011-2013), a process will need to determine which functions and legislative development responsibilities will be managed by national level authorities, and which roles and responsibilities can be delegated to the various jurisdictional authorities mentioned above. Examples of national-level functions and the agencies responsible include:

- National Government Coordination: REDD+ Taskforce
- National Government-Donor Coordination: TWGs (e.g. TWGF&E, TWGFi, TWGAg, TWGLands, including proposed new TWGs on Environment and Climate Change), using existing structures under the Government-Donor Coordination Committee (GDCC)
- Development of policies and subsidiary regulations under existing laws, that are harmonised with the existing legal framework in the country: Council of Ministers and Ministries
- National baseline (reference level or reference emission level): led by FA/MAFF, with input from GDANCP/MoE and FiA/MAFF
- National forest carbon accounting standards (e.g. methods to be used, definitions of forests, etc.): REDD+ Taskforce and MRV/REL Technical Team (including FA, GDANCP, MLMUPC and other line agencies as appropriate)
- National registry and independent monitoring of results: to be decided
- International negotiations: GDANCP/MoE, FA/MAFF and Ministry of Foreign Affairs
- Reporting to UNFCCC and National Greenhouse Gas Inventories: MoE, based on review by the NCCC
- Conflict resolution mechanisms (e.g. National Committee for Land Disputes/Conflict Resolution, National Authority on Forest Land Conflict Resolution)
- Land-use planning: National Land Management Committee, led by MLMUPC
- Land Administration (registration of land parcels): Cadastral Administration, led by MLMUPC
- Subnational Administration, and reviewing powers to be transferred to subnational levels: MoI
- Determining REDD+ project guidelines: REDD+ Taskforce
- State revenues management: MEF

B. Subnational Implementation

The implementation of REDD+ by each jurisdictional agency would be based on the National REDD+ strategy (see Component 2b), and the three main Government plans: the National Forest Programme (NFP, 2010) for the forestry sector, particularly the Permanent Forest Reserve, the planned National Protected Areas Strategic Management Plan for the Protected Area network, and the Strategic Planning Framework for Fisheries (2010).

Examples of functions that could be regulated by the various line agencies might include:

- Monitoring of forest carbon (using the nationally-approved accounting rules) within forest areas of each agency's jurisdictional responsibility
- Setting reference levels / reference emissions levels for forest areas within each agency's jurisdictional responsibility
- Setting rules for benefit-sharing for forest areas within each agency's jurisdictional responsibility
- Approving REDD+ projects in forest areas within each agency's jurisdictional responsibility
- Monitoring implementation of REDD+ projects in forest areas within each agency's jurisdictional responsibility

Local communities should be involved in local management decisions, implementation and monitoring, e.g. through existing Community Forestry agreements and similar modalities. Other non-state actors, such as NGOs or community forestry groups, may play key roles in implementation at particular sites.

Implementation is expected to involve REDD+ projects within a nested framework. Examples might include implementation in:

- protected areas or groups of protected areas
- community forests or groups of community forests and/or indigenous communal land titles in the Permanent Forest Estate
- community protected areas or groups of community protected areas and/or indigenous communal land titles in PAs
- protection forests
- forestry concessions
- groups of Permanent Forest Reserve units: e.g. a protection forest, areas of production forest, and several community forests

Implementation would involve working at subnational scales, such as entire provinces or forested regions (e.g. the Eastern Plains). Subnational implementation might require Government agencies to cooperate in setting reference levels and monitoring systems, e.g. in cases where Protected Areas are adjacent to Protection Forests. For example, Mondulkiri province includes parts of four Protected Areas (Snoul WS, Phnom Prich WS, Phnom Nam Lyr WS and Lomphat WS), two Protection Forests (Seima PF and Mondulkiri PF), Production Forest areas, and indigenous lands.

Table 9. Draft Cambodia REDD+ Implementation Framework

National Level Coordination	- Coordination of National REDD+ Readiness: Cambodia REDD+ Taskforce (Terms of Reference in Annex 1a)
Technical Support and Coordination	- REDD+ Taskforce Secretariat (Terms of Reference in Annex 1a) Includes lead Government agency counterparts, international REDD+ advisor, international MRV/REL advisor, national coordinator as secretary to the Taskforce
National Level Roles and Responsibilities	*Functions coordinated by REDD+ Taskforce (no single agency has exclusive jurisdiction)* - Development of REDD+ policies and subsidiary regulations under existing laws that are harmonised with the existing legal framework in Cambodia - Development of National REDD+ registry and independent monitoring (structure to be decided) - Development of Guidelines for REDD+ projects in Cambodia, including procedures for Government approval (Technical Team under the REDD+ Taskforce, composition and responsibilities to be decided) - Determining benefit-sharing and REDD+ revenue management (Technical Team under the REDD+ Taskforce, composition and responsibilities to be decided) - Setting Cambodia's RELs and rules for MRV (MRV/REL Technical Team under the REDD+ Taskforce, composition and responsibilities to be decided), including national forest carbon accounting methods (e.g. methods to be used, definitions of forests, etc.) - Development of consultation plan and strategic environmental and social assessment framework (Technical Team under the REDD+ Taskforce, composition and responsibilities to be decided) *RGC (as state properties and state revenue manager)* - Decisions over REDD+ revenue management and carbon credit sales *Forestry Administration/MAFF (as government institution with general jurisdiction over forest resources)* - National Forest Monitoring System, including National Forest Cover Assessments and National Forest Inventories (with support for MoE for PAs and FiA/MAFF for flooded forests) *Climate Change Department of Ministry of Environment (as government agency responsible for the UNFCCC)* - Preparing reports to UNFCCC and national greenhouse gas inventories *Ministry of Land, Management, Urban Planning and Construction* - Registration of all lands that might come under REDD+ arrangements (State Public, State Private, Private Lands, Indigenous Lands) - Land-use planning and national mapping standards *Ministry of Economy and Finance* - public revenues/state financial management
Harmonization of REDD+ with other policies, laws and regulations of the RGC	*Climate Change Policy* - National Climate Change Committee *Conflict resolution mechanisms* - e.g. through Commercial Arbitration Council, Council for Land Policy, National Committee for Land Disputes/Conflict Resolution, National Authority on Forest Land Conflict Resolution *Land Policy* - Council for Land Policy, National Land Management Committee, led by MLMUPC *Decentralisation & Deconcentration Strategic Framework* - National Committee for Democratic Development at Subnational Levels, led by MoI

Subnational Implementation of REDD+ Strategies	Forestry Administration (MAFF)	GDANCP (MoE)	Fisheries Administration (MAFF)
	Regulatory authority over Permanent Forest Estate, including jurisdictional management authority over Permanent Forest Reserve	Jurisdictional management authority over Protected Areas	Jurisdictional management authority over flooded forest & mangroves
Subnational responsibilities in area under jurisdiction	- Monitoring forest carbon and REDD+ implementation - Setting reference levels - Approving REDD+ projects - Facilitating forest carbon credit sales - Determining benefit-sharing arrangements? - Stakeholder consultation	- Monitoring forest carbon and REDD+ implementation - Setting reference levels - Approving REDD+ projects - Facilitating forest carbon credit sales - Determining benefit-sharing arrangements? - Stakeholder consultation	- Monitoring forest carbon and REDD+ implementation - Setting reference levels - Approving REDD+ projects - Facilitating forest carbon credit sales - Determining benefit-sharing arrangements? - Stakeholder consultation
Main Implementation Strategies	REDD+ strategy implementation through the National Forestry Programme (2010) and REDD+ financing plan (to be written)	REDD+ strategy implementation through National Protected Areas Strategic Management Plan (to be written) and financing plan (to be written)	REDD+ strategy implementation through Strategic Planning Framework for Fisheries (2010) and REDD+ financing plan (to be written)
Key activities supported under the REDD+ Roadmap	- Elaboration of section 6 of the NFP to include revised REDD+ revenue estimates and implementation costs - Integration of REDD+ into Community Forestry, Indigenous Communal Land Titles, Protection Forests, and other Forest Management activities - Improving FLEG - Investigating FLEGT processes - Promoting multiple benefits of forests - Conservation concessions? - REDD+ fund management mechanisms - Capacity-building	- Development of National Protected Areas Strategic Management Plan & financing estimates - Development of necessary subsidiary rules and regulations under the 2008 PA Law - Integration of REDD+ into Community Protected Areas and Indigenous Communal Land Titles - Conservation concessions? - Linkages with PES - Protected Area fund mechanisms - Capacity-building	- Consideration of integration of REDD+ and flooded forests and mangrove areas under the Strategic Planning Framework on Fisheries - Investigation of REDD+ linkages with Community Fisheries - Capacity-building
Demonstration activities	- Finalise existing two pilot projects (Oddar Meanchey & Seima) - Investigate options for regional demonstration at provincial/landscape scale (with GDANCP/MoE)	- Completion of 1-2 pilot projects (locations to be decided) - Investigate options for regional demonstration at provincial/landscape scale (with FA/MAFF)	to be decided
	Projects will be nested within the overall national REDD+ framework		

Additional Implementation Framework Elements

Additional elements of the Implementation Framework will need to include:

1. Fund and revenue management for REDD+ Implementation
2. Private sector engagement
3. Benefit-sharing at sub-national level
4. Mechanisms for documenting existing knowledge and sharing lessons learned between Government agencies and other stakeholders
5. Independent review of REDD+ implementation
6. Demonstration activities

1. Fund and revenue management for REDD+ Implementation

Finance for REDD+ Readiness implementation is available from:

- Donor grants through existing mechanisms
- Fund-based mechanisms
- Carbon market mechanisms, including private sector investment

Through the REDD+ Readiness phase Cambodia could establish a REDD+ Trust Funds to provide funding for REDD+ Readiness and for later performance-based payments. The REDD+ Trust Funds could either use an existing modality (e.g. Protected Area Trust Fund mandated under the 2008 Protected Area Law) or establish a new fund or series of funds. A critical issue would be to investigate modalities for management of the funds that are transparent and have clear governance arrangements, but remain state revenue. This work would be undertaken by the Benefit-sharing Technical Team, which will include representation from MEF.

Cambodia could also develop rules for sales of carbon credits to the Voluntary Carbon Market and future compliance markets. Revenue generated from carbon credit sales could be used to support national regulatory functions.

2. Private sector engagement

Cambodia has been successful at attracting some private sector investment for development of REDD+ projects (e.g. TGC in Oddar Meanchey). The Implementation Framework could consider how to further incentivise and encourage private sector investment. Private sector partners could be invited to participate in decisions on how REDD+ carbon market project guidelines and regulations are developed, to ensure that these are developed appropriately.

3. Benefit-sharing

Cambodia already has some existing pilot examples of benefit-sharing agreements and fund-disbursement mechanisms relating to management of forests and wildlife, even if they are not specific to REDD+. These examples need to be documented and studied in order to understand the implications for future REDD+ benefit-sharing arrangements, e.g.:

- The Oddar Meanchey Community Forestry REDD+ pilot project, created under 2008 Decision no. 699 of the Council of Ministers
- The Commune/Sangkat fund Natural Resource Management (NRM) allocations, under the National Committee for Decentralisation and Deconcentration
- Community-based Ecotourism
- Payments to villagers to protect forest in the Cardamom mountains
- Payments to villagers for wildlife protection
- Community Forestry, Community Fisheries, Community Protected Areas
- Community-based NTFP livelihood/enterprise development

A Technical Team under the REDD+ Taskforce could be formed to investigate benefit-sharing examples and document the lessons learned, which would need to include MEF.

Building on these examples, considerable work is therefore required to understand better how benefit-sharing might work in Cambodia. Benefit-sharing may need to work at multiple scales, including:

- National-level payments (e.g. compensation for cancelling social and economic land concessions)

- Payments to Jurisdictional Agencies, e.g. for capacity-building or results
- Payments to individual landscape units, e.g. Protected Areas or Protected Forests, to cover management costs and for results at achieving REDD+
- Payments to provinces, districts and/or communes as appropriate, e.g. for land-use planning or forming development plans
- Payments to communes, villages and even households for results at achieving REDD+

Different implementation modalities for benefit-sharing may be required depending on the scale of implementation.

In the absence of sufficient information to inform decision-making the best approach might be to allow continued piloting, either through payments for ecosystem services programs (e.g. ecotourism, wildlife payments, forest protection payments, PES programs) and through pilot REDD+ projects (e.g. Oddar Meanchey and Seima). Only once these pilots have been implemented for several years will it be possible to make robust conclusions about the form of benefit-sharing arrangements.

Any proposed benefit-sharing arrangements will need to be consulted upon and agreed widely. However, it is also important not to raise expectations if the likelihood of benefits being provided in the immediate term (e.g. within a year) is low.

4. Documenting lessons learned

REDD+ implementation will need to build on existing pilots, e.g.

- Community Forests: e.g. Oddar Meanchey REDD project (Forestry Administration)
- Protection Forests: e.g. Seima (Forestry Administration)
- Protected Areas: e.g. Samkos WS, or Kulen Promtep WS (Ministry of Environment

It will be important to capture and utilize lessons learned from these pilots in order to build capacity within the various government actors, and to inform the overall national framework development process.

5. Independent Review of REDD+ Implementation

Mechanisms for independent review of REDD+ implementation will need to be considered.

6. Demonstration activities

Demonstration activities will form an important part of REDD+ implementation and for generating lessons learned. Demonstration projects will prioritise the completion of existing pilots, be based on the guidelines established by the Technical Team on REDD+ Projects and will follow the principles established in Section 3 (Development of REDD+ Strategies) above. Implementation of the demonstration activities will be monitored by the Technical Team on REDD+ Projects

<u>The REDD+ Roadmap: Development of the Cambodia REDD+ Implementation Framework:</u>

1. Legal and Policy Development

Any legal development work should be based on identifying and modifying areas of law where gaps, conflicts or overlapping jurisdictions that hinder effective implementation exist. This would include enacting new sub-decrees, or *prakas*, or regulations under existing laws. Flexibility should be maximized at the outset for the initial phases of REDD+ planning, piloting and implementation in order to allow for testing various approaches to REDD+ within the existing frameworks. Once enough lessons and experiences are gained from REDD+ related activities and pilots, then a comprehensive national policy and legal framework for REDD+ could be created. There should not be a rush to put in place various rules and regulations that are poorly designed and not properly integrated into the Cambodian context.

Further legal work is required to identify how subsidiary regulations under the 2008 Protected Areas Law, 2002 Forestry Law and 2006 Fisheries Law might need to be amended or new regulations developed in order to implement REDD+.

Only if it is found to be necessary, should the National Assembly enact legislation on REDD+ implementation in the country, but only after enough time has passed to understand what does and does not work in the Cambodian context for REDD+ implementation.

Key Activities:

- Understanding how to integrate REDD+ into Community Forestry, Community Fisheries, Community Protected Areas & Indigenous Communal Land titles, including implementation within larger forest management units (e.g. Protected Areas or Protection Forests or Forestry Concessions) that contain smaller community-managed or owned forest areas
- Legal analysis & development, e.g. including development of regulations under the 2008 Protected Area law
- Analyzing how to link projects to subnational and national implementation
- Establishing national-level guidelines for REDD+ demonstration projects, developed by the Technical Team on REDD+ Projects and informed by the lessons learned from existing REDD+ activities
- Analyzing links with other Government policy processes and laws, including the NCDD and land-use planning
- Investigating conservation concessions as an implementation modality for REDD+

2. Benefit-sharing studies

- Establishment of Benefit-Sharing Technical Team
- Documentation of existing examples
- Analysis of potential future benefit-sharing arrangements for PAs, PFs, Concession Forests, CFs, CFis, Fishing Lots, CPAs, Indigenous Communal Land Titles
- Consideration of who should benefit from REDD+ under the different implementation modalities
- Consultation on options considered

3. Establishing the Trust Funds for REDD+

Key Activities:

- Analysis of existing fund mechanisms under Cambodian Law
- Establishing the Fund) or development of mechanisms to use existing Funds

4. Demonstration Activities

Key Activities:

- Supporting 2-6 REDD+ projects approved by Government agencies (Oddar Meanchey, Seima, +...)
- Pilot forest protection contracts
- Pilot Conservation Concessions options, if initial analysis shows the approach is feasible
- Building capacity for provincial-level REDD+ in two provinces and supporting subsequent REDD+ demonstration
- Documentation of results

5. Development of National REDD+ Registry and Independent Review

Key Activities:

- Analysis of registry options consistent with the nested approach to REDD+ implementation with independent projects by Government agencies, non-state actors and local communities
- Consideration of how independent review of REDD+ implementation should be undertaken
- Consultation on the options considered

The registry should adopt a land-based approach, so that emissions reductions can be tracked to particular forest areas in the country.

6. Development of the Implementation Framework:

Key Activities:

- Regular review meetings
- Develop Draft Implementation Framework

Table 2c: Summary of Implementation Framework Activities and Budget						
Main Activity	**Sub-Activity**	**Estimated Cost (in thousands)**				
		2011	**2012**	**2013**	**2014**	**Total**
Policy and legal development	- Integration of REDD+ into Community Forestry, Community Fisheries & CPAs - Legal analysis & development, e.g. including development of regulations under PA law - Establishing national-level standards for REDD+ projects - Analyzing how to link projects to subnational and national implementation - Analyzing links with other Government policy processes and laws, including the NCDD and land-use planning - Investigating REDD+ Conservation Concessions	$25	$75	$100	$	**$200**
Benefit-sharing studies	- Establishment of Benefit-Sharing Technical Team - Documentation of existing examples - Analysis of potential future benefit-sharing arrangements for PAs, PFs, Concession Forests, CFs, Cfis, Fishing Lots, CPAs - Consultation on options considered	$75	$75	$	$	**$150**
Establishing REDD+ Fund Mechanisms	- Analysis of existing fund mechanisms under Cambodian Law - Establishing the Fund(s), which could include use of a Protected Areas Trust Fund	$30	$70	$50	$	**$150**
Demonstration activities	Pilot Projects (including UNDP Small Grants)	$400	$400	$100	$	**$900**
	Capacity-building and development of REDD+ infrastructure in two provinces	$	$525	$525	$	**$1,050**
Development of National REDD+ Registry and Independent Review	- Analysis of registry options consistent with the nested approach to REDD+ - Consideration of how independent review of REDD+ implementation should be undertaken - Consultation on the options considered	$	$50	$50	$	**$100**
Development of overall National Implementation Framework	- Regular review meetings - Develop Draft Implementation Framework	$	$	$50	$	**$50**
Total		**$530**	**$1,195**	**$875**	**$**	**$2,600**
Government		$	$25	$25	$	**$50**
FCPF		$	$575	$750	$	**$1,325**
UN-REDD Programme (if applicable)		$100	$50	$	$	**$375**
Other Development Partner 1 (UNDP)		$300	$250	$	$	**$550**
Other Development Partner 2 (JICA)		$100	$100	$100	$	**$300**
Other Development Partner 3 (name)		$	$	$	$	**$**

2d. Social and Environmental Impacts during Readiness Preparation and REDD-plus Implementation

Box 2d-1: COP Decision -/CP.16, Safeguards (selected text)

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

Annex 1: Guidance and safeguards

"… 2. When undertaking activities referred to in paragraph 70 of this decision, the following safeguards should be promoted and supported:

(a) Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;
(b) Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
(c) Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
(d) The full and effective participation of relevant stakeholders, in particular, indigenous peoples and local communities, in actions referred to in paragraphs 70 and 72 of this decision;
(e) Actions are consistent with the conservation of natural forests and biological diversity, ensuring that actions referred to in paragraph 70 of this decision are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits;[1]
(f) Actions to address the risks of reversals;
(g) Actions to reduce displacement of emissions."

source: unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf

Standard 2d the R-PP text needs to meet for this component:
Assessment of social and environmental impacts:

The proposal includes a program of work for due diligence for strategic environmental and social impact assessment in compliance with the World Bank's or UN-REDD Programme's safeguard policies, including methods to evaluate how to address those impacts via studies, consultations, and specific mitigation measures aimed at preventing or minimizing adverse effects. For countries receiving funding via the World Bank, a simple work plan is presented for how the SESA process will be followed, and for preparation of the ESMF.

Note: this section was prepared based on an earlier version of the R-PP template and will need to be updated before initiation of R-PP activities.

Background

An effective governance system for REDD+ will be essential to its success at both the national and international levels. Countries that can demonstrate that REDD+ can achieve co-benefits, in terms of social and biodiversity benefits, should be more likely to attract early investment both from the international donor community and the private sector. Demonstrating an effective governance framework for REDD+ will be important to attract this investment, in particular to reassure investors that the results achieved will be sustained over the longer-term. Developing an effective governance system for REDD+ will require:

- Identifying appropriate policies to tackle the complex political and economic incentives which have resulted in a lack of forest law enforcement, high levels of deforestation and forest degradation and unsustainable management practices (see Component 2b);
- Identifying pragmatic and nationally-appropriate criteria for performance-based payments (see Component 2c);
- Demonstrating that revenue does go to the intended beneficiaries (see Component 2c);
- Ensuring meaningful accountability to domestic stakeholders (see Component 1c); and

- Monitoring impacts to ensure that negative effects on local people and biodiversity are avoided and in order to demonstrate positive effects of REDD+ implementation (see Component 4b).

Strategic Environmental and Social Assessment (SESA) is the approach used by the World Bank FCPF to identify, avoid and mitigate risk and adverse impacts, and to enhance positive impacts (e.g., sustainability, benefit sharing) from REDD+ readiness activities and during REDD+ implementation. SESA is defined as "a range of analytical and participatory approaches that aim to integrate environmental and social considerations into policies, plans and programs and evaluate the inter linkages with economic, political, and institutional considerations" SESA can be described as a family of approaches which use a variety of tools, rather than a single, fixed, prescriptive approach. A SESA has two components: the strategic assessment (SA) and the Environmental and Social Management Framework (ESMF). The SA should consist of an assessment of legal, policy, regulatory, institutional and capacity gaps to address key environmental, social and governance issues associated with the underlying causes of deforestation. The ESMF should provide a framework for the assessment of environmental and social risks of specific actions/projects within the REDD+ strategy to reduce deforestation and forest degradation – providing the link between the SESA and the World Bank's safeguard policies.

As a UN REDD country, Cambodia also needs to comply with the relevant guidance from the UN REDD programme. This includes the operational guidance on the engagement of indigenous peoples and other forest dependent communities[52], the United Nations Declarations on the Rights of Indigenous Peoples, the UNDG Guidelines on Indigenous Peoples' Issues and the International Labour Organisation Convention No. 169. With respect to UN REDD Programme activities Free, Prior and Informed Consent (FPIC) must be adhered to. Cambodia has also held discussions with the Climate, Community and Biodiversity Alliance (CCBA) and CARE-International regarding the REDD+ Social and Environmental Standards.

Through the development and implementation of the SESA in Cambodia the National REDD+ Strategy will be able to identify what is required for REDD+ activities to comply with both national and international safeguards, and to identify areas for strengthening that are required within: (i) legal, regulatory, and policy frameworks; (ii) institutions; and (iii) mechanisms for citizen engagement. Undertaking a strategic assessment of a policy development process to identify potential positive and negative impacts of implementation (and to whom) is a relatively new concept in Cambodia and will need to be undertaken slowly with appropriate steps to ensure national ownership and build capacity.

Cambodia has an existing framework for Environmental and Social Impact assessment for activities within natural forest areas under the Law on Environmental Protection and Natural Resources Management (1996), Sub-Decree on Environmental Impact Assessment Process (1999), the Forestry Law (2002) and the Law on Management and Exploitation of Mineral resources (2001). The currently existing Prakas on Guidelines for Preparing the Environmental Impact Assessment Report (2000) is however only one page in length and adds little guidance with regards to the EIA process. Similarly the approach to developing a Social Impact Assessment receives little attention within the legal framework and consequently no guidance exists to inform implementation. More widely there are significant constraints to the full implementation of regulations both in terms of technical capacity and the wider enabling environment resulting in weak implementation of existing regulations. The legal analysis undertaken as part of the R-PP preparation process[53] suggests that revisions of these frameworks may be necessary if REDD+ safeguards are to be promoted and supported (see Annex 2a).

<u>SESA activities undertaken during the R-PP Formulation Phase</u>

During the R-PP formulation phase the following SESA activities were undertaken:

- Stakeholder analysis, and identification of key stakeholder coordination mechanisms (see Components 1b and 1c, and Annex 1b for further details).

[52] UN REDD (2009) Operational Guidance: Engagement of Indigenous Peoples and Other Forest Dependent Communities. Working Document. June 25, 2009.

[53] Oberndorf, R. and Nhean, M. 2010. REDD+ in the Cambodian context. An overview of the policy, legal and governance Frameworks impacting implementation. Report for the Cambodia REDD+ readiness process.

- Planning the coordination arrangements for SESA through the design of the Consultation and Safeguards Technical Team, which is also responsible for development of the Consultation and Participation Plan (see Component 1a). This ensures that environmental and social considerations will be integrated into the REDD+ Readiness process and REDD+ strategy development.
- Consultation on appropriate national safeguards for REDD+ Readiness during the second national multi-stakeholder consultation on September 10, 2010. Participants at the consultation expressed concern that the concept of SESA was not well understood in Cambodia and identified that a Technical Team should be assigned responsibility for further development of the concept.
- Establishment of a consultation and participation plan, which is presented in Component 1c. This plan was written based on the results of the two national multi-stakeholder consultations and a special 2-day consultation led by civil society, attended by over 60 participants from community forestry, indigenous peoples and other grassroots civil society groups. Environmental and in particular social concerns have been explicitly written into this consultation plan – for example ensuring that the voice of grassroots civil society is heard. The planned Consultation Group structure (see Component 1a) has been extensively reviewed with NGOs and civil society, to ensure their adequate representation and participation in the Readiness process.
- Identification of the key drivers of deforestation and forest degradation, which are presented in Component 2a. These drivers were identified by a preparatory report written by FAO[54] and then discussed at the national consultations and during a technical review meeting on 7 September 2010. Further modifications were made to the drivers based on the results of the international reviews of the UN REDD National Programme and the draft R-PP.

A review of current REDD+ safeguards and standards, including those used by the FCPF, UN REDD, the REDD+ Social and Environmental Standards, FPIC, and safeguards and standards for forest governance frameworks, was also undertaken (see the Cambodia REDD+ Background Document, 2010).

Planned SESA activities during the R-PP Implementation Phase

Cambodia has been selected as a pilot country under the 'Multiple Delivery Partners' arrangement, with UNDP as the potential delivery partner. Resolution PC/7/2010/4 of the Participants Committee of the FCPF decided to establish a task force, including PC members, observers and potential delivery partners, to develop a common approach to environmental and social aspects for the provision of readiness support to REDD countries by delivery partners. This task force is expected to complete its work by June 2011, and its findings are expected to have a significant effect on the social and environmental impact assessment procedures and safeguards Cambodia will be expected to follow during the R-PP implementation phase. Most likely, therefore, this section will need to be substantially revised prior to the initiation of the Readiness Preparation Grant.

A critical step will be for the REDD+ Taskforce to develop a set of nationally appropriate safeguards, based on appropriate consultation, which will be used to then evaluate the potential impacts of policy reforms. This could take the form of an Environmental and Social Management Framework (ESMF) or similar framework. The framework should include guidance notes on how to apply the safeguards identified and management arrangements for their implementation and monitoring. The development of the framework would be led by the Consultation and Safeguards Technical Team under the REDD+ Taskforce.

The SESA will need to be linked to the REDD+ monitoring system, to be developed under Component 4b of the R-PP, which should include monitoring of the safeguards identified.

Key Activities led by Technical Team on Consultation and Safeguards will include:

[54] Broadhead, J. and Izquierdo, R. 2010. Assessment of land-use, forest policy and governance in Cambodia. Report prepared by FAO as a contribution to the Cambodia REDD+ readiness process. FAO-Regional Office for Asia and the Pacific, Bangkok

- In-depth analysis of current regulations relating to EIA, SIA, and SESA and constraints to the implementation
- Analysis of REDD+ safeguard options, based on international guidance and nationally appropriate activities
- Development of framework of social and environmental indicators, monitoring requirements, management, and recourse mechanism in consultation with key stakeholders and civil society
- Initiate integration of basic social and environmental safeguards into existing REDD+ demonstration activities, including pilot indicators and monitoring, in order to determine if the safeguards identified are appropriate and can be monitored effectively.
- SESA of the candidate REDD+ Strategies performed under Component 2b.
- Development of a ESMF or equivalent that is both nationally appropriate and complies to international standards, including:
  - capacity building requirements
  - triggers of when different assessments are required
  - a effective recourse mechanism
  - how the implementation framework will be operationalised – e.g. institutions responsible at national level and subnational if appropriate
- Consultation on the proposed ESMF
- REDD+ Taskforce meeting to review ESMF report
- Capacity-building on the ESMF
- Application of the ESMF to all R-PP activities
- Legal reform, if necessary, to institutionalize the national REDD+ safeguards within the REDD+ implementation strategies
- SESA of National REDD+ Strategy under Component 2b
- Monitoring of social and environmental impacts under Component 4b.

Table 2d: Summary of Social and Environmental Impact Activities and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2011	2012	2013	2014	Total
Development of Environmental and Social Management Framework (ESMF)		$50	$	$	$	**$50**
Application of the ESMF to all R-PP activities		$0	$25	$25	$	**$50**
Total		**$50**	**$25**	**$25**	**$**	**$100**
Government		$	$	$	$	**$**
FCPF		**$50**	**$25**	**$25**	**$**	**$100**
UN-REDD Programme (if applicable)		$	$	$	$	**$**
Other Development Partner 1 (name)		$	$	$	$	**$**
Other Development Partner 2 (name)		$	$	$	$	**$**
Other Development Partner 3 (name)		$	$	$	$	**$**

Component 3: Develop a Reference Level

Box 3-1: COP Decision -/CP.16, National Forest Reference Emission Level and/or Forest Reference Level

"71. (b) A national forest reference emission level and/or forest reference level[6] or, if appropriate, as an interim measure, subnational forest reference emission levels and/or forest reference levels, in accordance with national circumstances, and with provisions contained in decision 4/CP.15, and with any further elaboration of those provisions adopted by the Conference of the Parties;

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

source: unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf

Standard 3 the R-PP text needs to meet for this component: Reference Level:

Present work plan for how the reference level for deforestation, forest degradation (if desired), conservation, sustainable management of forest, and enhancement of carbon stocks will be developed. Include early ideas on a process for determining which approach and methods to use (e.g., forest cover change and GHG emissions based on historical trends, and/or projections into the future of historical trend data; combination of inventory and/or remote sensing, and/or GIS or modeling), major data requirements, and current capacity and capacity requirements. Assess linkages to components 2a (assessment of deforestation drivers), 2b (REDD-plus strategy activities), and 4 (MRV system design).

(FCPF and UN-REDD recognize that key international policy decisions may affect this component, so a stepwise approach may be useful. This component states what early activities are proposed.)

Objectives

The overall objective of this section is for the Royal Government of Cambodia to develop a scenario for the reference level (RL) that projects emissions and removals of CO_2 into the future in the absence of REDD+ incentives. Reference levels are an important concept in the operationalization of REDD+ at the country level because they establish the yardstick against which the achievements of national REDD+ policies and interventions are measured. Setting objective and correct reference levels will ensure that emission reductions or removals are real and verifiable. Decision 4/CP.15 "*recognizes that developing country Parties in establishing forest reference emission levels and forest reference levels should do so transparently taking into account historic data, and adjust for national circumstances*" (Article 7).

Reference levels (RL) and/or Reference Emission Levels (RELs) are likely to be based on historical trends and national circumstances, and constructed using historical data and assessment models. Measurement of results requires operational national forest monitoring systems for the collection of data such as forest land area, carbon stocks and their changes, and the elaboration of activity data and emission factors. This means that the REL will need to be developed in a way so that emissions and removals that are monitored in the future can be compared directly to the emissions and removals in the reference level —in other words there will be consistency between the approaches used for the REL and the MRV (Measurement, Reporting and Verification) system (see Component 4).

At this stage, it is unknown how the modalities for establishing the RELs will be set as policy decisions are ongoing under the UNFCCC. However, it is clear from Decision 4/CP.15 that RELs will be based on historical data, adjusted for national circumstances. The country will provide a description of the national circumstances which may include information on features of their geography, climate and economy which may affect their ability to deal with mitigating and adapting to climate change, as well as information regarding their specific needs and concerns arising from the adverse effects of climate change and/or the impact of the implementation of response measures, as contained in Article 4, paragraph 8 and, as appropriate, in Article 4, paragraphs, 9 and 10, of the Convention[55].

[55] UN (1998), Kyoto Protocol to the United Nations Framework Convention on Climate Change.

Establishing the REL involves three sub-goals:

- Quantification of *historic emissions/removals* from the five REDD+ activities[56] for the proposed period between 1998 to 2010 at a national scale, using the IPCC guidelines and guidance, and spatially represented to reflect differences in sub national activities in use and cover of the land
- Understanding Cambodia's *national circumstances*; and
- Development of *future trajectories* of emissions/removals over different time periods (e.g. 5 year and 10 year periods) and under different economic and development scenarios. This will take into consideration the national circumstances identified.

The ongoing discussions will be tracked by the Cambodia REDD+ Taskforce during the implementation stage of the Cambodia REDD+ Roadmap so as to ensure work being done on this topic will meet the policy requirements. However, any process agreed to for setting a reference level will be based on the historic emissions and national circumstances as starting points.

REL and RL Framework

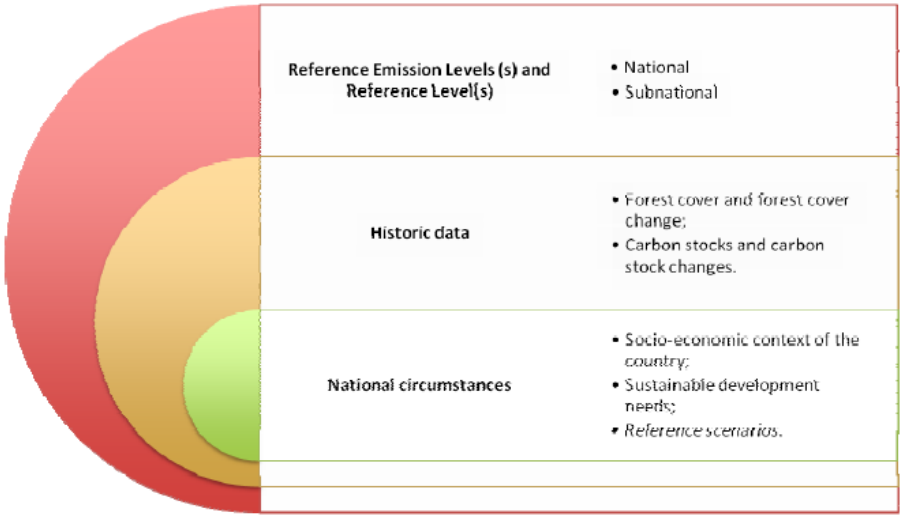
The RELs and RLs at a national and sub-national level are key elements to:

i. Define and quantify the mitigation objectives that Cambodia would like to reach through the implementation of REDD+;
ii. Measure the performance of REDD+ policies and actions.

Once the national REL and RL will be defined and be approved by the UNFCCC, Cambodia will then start by defining a national strategy for REDD+ implementation according to possible and potential emission reduction and removals enhancement targets.

The national strategy for REDD+ implementation will define at which scale the REDD+ national policies and measures will be implemented, based on the nested approach (subnational implementation within a national framework). In this respect RGC will have to provide some methodological guidelines for the definition and the assessment of the subnational RELs and RLs and also guidelines on which kind of objective (targets) could be reached at subnational level. Once Cambodia has in place the full set of national and sub-national RELs and RLs, then it will be possible to have a system that could assess the performances of the different REDD+ actions at a national and sub-national scale. A system to measure REDD+ action performances will be the key element for a possible payment system for REDD+ implementation.

Figure 7 below shows how information on national circumstances and historic data provide the data that a country needs to establish the REL(s) and RL(s).



[56] (i) reducing emissions resulting from deforestation; (ii) reducing emissions resulting from forest degradation; (iii) the role of conservation; (iv) the role of sustainable management of forests, and (v) the role of enhancement of forest carbon stocks.

Figure 7: Key principles for RELs and RLs

The main criteria that the REL and RL will seek to comply with are the following:

- Environmental integrity: The REDD+ mechanism will work in favor of climate protection and have to ensure that its corresponding activities will result in real climate change mitigation actions. Given the various forms of uncertainty described herein, prudence suggests that REL and RL be set conservatively (potential emission reduction or enhancement of removal should not be overestimated) as a safeguard or global GHGs mitigation efforts.

- Accuracy: Accuracy is a relative measure of the exactness of an emission or removal estimate. Estimates should be accurate in the sense that they are systematically neither over nor under true emissions or removals, as far as can be judged, and that uncertainties are reduced as far as practicable. Cambodia will use methodologies contained in the IPCC most recent Guidance and Guidelines to ensure accuracy in the REL and RL estimates.

- Comprehensiveness: The REL and RL should cover all relevant REDD+ activities: reducing emission from deforestation, reducing emission from degradation, conservation of forest carbon stocks, sustainable management of forest, and enhancement of forest carbon stocks. The comprehensiveness principle will be also applied for the assessment of the forest carbon related data and in particular this means that all the five IPCC carbon pool will be considered in the estimation of the carbon stock changes.

- Transparency: The data that Cambodia will use to establish REL and RL will be available for open and independent reviews. Transparency will mean also that the assumptions and methodologies used to assess the REL and RL will be clearly explained to facilitate replication and assessment by users of the reported information and by other relevant stakeholder. The transparency of REL and RL is fundamental to the success of the process for the communication and consideration of REDD+ process in Cambodia.

- Comparability: Cambodia's estimates of emissions and removals reported in its REL and RL should be comparable among all the other reported estimates by non Annex I Parties. For this purpose, Cambodia will use the methodologies and formats agreed by the COP for estimating and reporting REL and RL.

- Consistency: The REL and RL will have to be internally consistent in all its elements regarding estimates done in different years. Moreover REL and RL will also have to be consistent with the methodologies that Cambodia is going to use for the estimation of carbon stock and carbon stock changes in subsequent REDD+ application periods.

- Feasibility: The proposed approaches for establishing REL and RL will have to ensure that REL and RL could be defined with a reasonable level of effort and expense or else they will simply not be done well or done at all. Feasibility factors include data availability, analytical capabilities, cost of data collection and analysis, and institutional support for these efforts.

Background data on forest land assessment and carbon stocks

Cambodia has substantial amounts of data on forest land uses and land use changes, and in forest carbon stocks that could be adapted for REDD+ reporting under the UNFCCC. The current and historical data on forest cover assessments and data on forest carbon stocks are particularly important for development of the REL/RL.

Cambodia Forest Cover Assessments

Cambodia has one of the highest forest coverage in South East Asia, with approximately 10.7 million hectares or roughly 60% of the national territory[57]. The extent of Cambodian forests are significantly declining[58] (Figure 8) due to land use change, forest degradation through logging, forest fires, land-grabbing and encroachment of agriculture. The land use change is considered relatively high, with 379,485 hectares of forest cleared between 2002 and 2005/6[21], equivalent to a deforestation rate of 0.8%

[57] Forestry Administration, 2007. Forest Cover Changes in Cambodia, 2002-2006. Paper prepared for the Cambodia Development Cooperation Forum. Forestry Administration, Phnom Penh.
[58] Cambodia's National Forestry Programme. 2009. Strategic Framework Document. 288 pp.

per year. As a consequence Cambodia can be considered to be a 'high forest cover, high deforestation' country for the purposes of REDD[59].

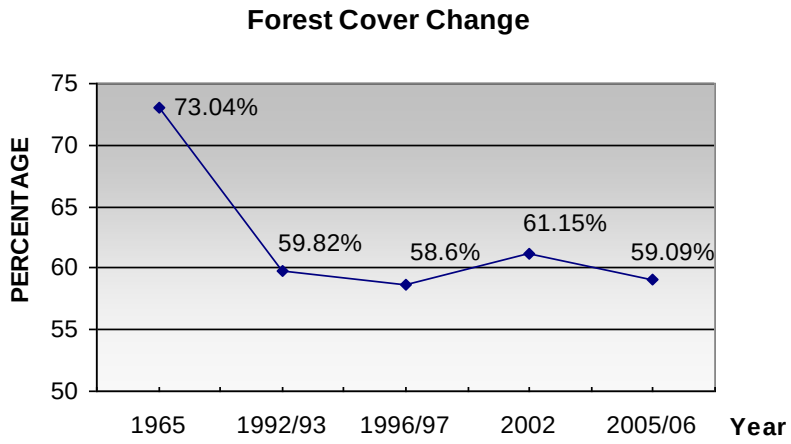


Figure 8. Change in forest cover from 1965-2006 (Forestry Administration 2007)

Figure 8 shows the available data on forest cover from national assessments since 1965. The figure suggests that forest cover has fluctuated between 58 and 61% since 1992/3. However, the differences in the estimates for various years is mainly because of different analysis methods that were used[60]:

- The 1988/1989 dataset, produced by the Mekong Secretariat, is based on visual interpretation of LANDSAT satellite image hardcopies and identified 20 land use clases (where 9 classes depict various forest cover) at a scale of 1:250 000, and a minimum mapping unit of 1 km^2 (4 x 4 mm at map scale).
- The 1992/3 and 1996/7 datasets were produced by the Forest Cover Monitoring Project, a Mekong River Commission initiative executed by the GTZ. The two land cover datasets are based on the visual interpretation of 1992/1993 and 1996/1997 LANDSAT satellite image hardcopies, at a scale of 1:250 000 with a minimum mapping unit of 1 km^2. The Land use cover analysis for 1996/1997 results in a classification in 30 land cover classes (with 15 ''forest'' classes).
- The 2002 and 2005/6 analyses were produced by the Forestry Administration's GIS/RS Unit with the support of the Danida. The results of this analysis have been recently published in English and Khmer[61]. These country-wide analyses have been based on manual on-screen visual interpretation of Landsat ETM+ imagery. The digitalization process has been conducted with false colour combinations of bands 2, 3, 4. These two latest land cover datasets are the most accurate: a) the minimum mapping unit of 0.2 km^2 (20 ha), and b) the scale of 1:50 000, allowing a much thinner depiction of the different classes. However, the land cover nomenclature used for the year 2002 and 2005/06 differs from the one related to 1988/89 and 1996/97 databases. For 2006, the nomenclature adopted in 2002, 4 forest classes on a total of 8 land cover classes, has been slightly modified, as recommended by the GRAS A/S accuracy assessment report. Due to their low accuracy, the smaller classes have been merged with others increasing the accuracy from 71% to 74%. In the 2006 nomenclature, finally 5 land cover classes have been retained, the class 'bamboo' has been included in the 'other forest' class, while the classes 'wood & shrubland dry' and 'wood & shrubland evergreen' have been merged within the 'non-forest' class.

[59] As described in Griscom, B., Shoch, D., Stanley, B., Cortez, R. and Virgilio, N. 2009. Sensitivity of amounts and distribution of tropical forest carbon credits depending on baseline rules. Environmental Science and Policy 12: 897-911.
[60] Brun, S. 2009. Elaboration of Cartographic tools for reforestation, CDM and REDD project activities in Cambodia. ONF International, Paris.
[61] Forestry Administration. 2008. Cambodian Forest Cover; Forest cover map change 2002-2006.

As a consequence of these differences, whilst the 1992/3 and 1996/7 analyses are comparable, and the 2002 and 2005/6 analyses are also comparable, the 2002 and 2005/6 results cannot be compared to the earlier results from the 1990s.

The FA has undertaken an assessment of forest cover in 2010, using the same methodology as the 2002 and 2005/6 assessments. This is expected to be published in 2011.

Cambodia Forest Carbon Data

Cambodia has a large amount of existing forest carbon data (see below), from various historical forest inventories and more recently collected by REDD+ pilot projects. The datasets should provide fairly comprehensive information for most of the major dryland forest types, perhaps sufficient for Tier-2 levels under the IPCC guidance, but very little forest carbon stock data exists for flooded forest types and mangroves.

Table 10. Existing forest carbon plot data from Cambodia

Name of data	Description	# plots	Species/ forest types included	Min DBH (cm)	Year	Source
Permanent Sample Plots	1st measurement	120	(**)	>7.5	1998*	Field data
	3rd measurement	104	(**)	>7.5	2004*	Field data
	4th measurement	48	(**)	>7.5	2010*	Field data
Regrowth Forest	3rd measurement	15	(**)	>7.5	2010*	Field data
Kim-Phat et al. 2000 and Top et al. 2004[62]	Kompong Thom	60	Evergreen, Mixed, and Deciduous forest	>10	1997	Forestry Administration and Miyazaki University, Japan
Strategic Forest Management Plan (SFMP)	15 Forest Concessions	2000	Unlogged Evergreen	>Sapling	2002	Field data
		1760	logged Evergreen			
		1460	Unlogged Mixed			
		300	Logged Mixed			
		1360	Unlogged Deciduous			
		60	Logged Deciduous			
Tani 2007[63]	Kompong Thom, Kratie and Mondulkiri	34	Semi-evergreen, deciduous	>10	2003-5	Kyoto University

[62] Kim-Phat N, Ouk S, Uozumi Y, Ueki T. 2000. Stand dynamics of dipterocarp trees in Cambodia's evergreen forest and management implications - a case study in Sandan district, Kamong Thom. J Jpn Forest Plann 6:13-23. Top, N., Nobuya Mizoue, and Shigetaka Kai. 2004. Estimating forest biomass increment based on permanent sample plots in relation to woodfuel consumption: a case study in Kampong Thom Province, Cambodia. Journal of Forestry Research, 9:117-123

[63] Tani, A. 2007. Vegetation analysis of Cambodian forests based on species composition data. Masters thesis. Laboratory of Tropical Forest Resources and Environment, Graduate School of Agriculture, Kyoto University, Japan.

Name of data	Description	# plots	Species/ forest types included	Min DBH (cm)	Year	Source
Kiyono et al. 2010[64]	Several provinces	12	Evergreen, Deciduous, Secondary forests	>5	2005	Forestry and Forest Products Research Institute, Japan
Seima Carbon Stock Survey	Systematic Random Sample of project area, Mondulkiri province	225	All dryland types	>5	2008	WCS /FA
Preah Vihear Pilot Stock Survey	Systematic Random Sample of trial blocks, Preah Vihear province	72	All dryland types	>5	2010	WCS /FA/GDANCP
Seima High Value Forest survey	Randomly located plots in fairly small survey area, Mondulkiri province	9	Semi-evergreen /evergreen	>20	2004	WCS/CDRI/FA[65]
Cherndar High Value Forest Survey	Randomly located plots in fairly small survey area, Preah Vihear province	15	Evergreen	>20	2004	WCS/CDRI/FA
Oddar Meanchey Carbon Stock Survey	Systematic Random Sample of project area, Oddar Meanchey province					CFI/TGC/PACT/FA
Southern Cardamoms Carbon Stock Survey	Systematic Random sample of project area, Southern Cardamoms	124	All dryland types	>5	2010	ONFI/Wildlife Alliance/FA

(*) Year of measurement and remeasurement. (**) Number of species per forest types be calculated from PSPs and field practice is given per forest type.

Assessment of Cambodia National Circumstances

The evaluation of the national context of Cambodia will be based on (i) the analysis of existing socio-economic data; (ii) the analysis of the needs for future development of the Cambodia and (ii) potential forest cover changes (reference scenarios). In combination with historic data, these three components constitute the tool to take national decisions for the establishment of the REL and RL at national and sub-national scale. The assessment of the different national circumstances is a key element for the application of the UNFCCC principle of 'common but differentiated responsibilities' and it is the only factor (criteria) that has been used so far in the context of the UNFCCC to adjust human induced GHGs related data.

Collecting information on national circumstances provides the opportunity for detailing the Cambodia's national development priorities, objectives and circumstances that serve as the basis for addressing issues relating to climate change. Information provided on national circumstances is critical for understanding a country's vulnerability, its capacity and its options for adapting to the adverse effects of

[64] Kiyono, Y., Furuya, N, Sum, T., Umemiya, C., Itoh, E., Araki, M. and Matsumoto, M. 2010. Carbon stock estimation by forest measurement contributing to sustainable forest management in Cambodia. Japan Agricultural Research Quarterly. 44 (1), 81-92. http://www.jircas.affrc.go.jp.

[65] CDRI and WCS. 2004. Focusing on Cambodia's High Value Forests: Livelihoods and Management. CDRI, Phnom Penh.

climate change, as well as its options for addressing its GHG emissions within the broader context of sustainable development. The R-PP development process has identified the importance of establishing REL/RL at the national and subnational scale, and subnational RELs/RLs can be used as a tool for Government decision-making. The assessment of the national circumstances is already a reporting requirement for all the UNFCCC Parties and countries need to provide a specific chapter on them in their National Communication. However, there are no clear guidelines for the assessment and compilation of the national circumstances and each country is free to assess these following autonomous methodological approaches. Whilst awaiting further guidance from the UNFCCC, Cambodia can contribute become prepared for the international negotiations by undertaking initial analyses to understand the implications of different decisions. The assessment of national circumstances should contain the following information:

- Geographical characteristics: including climate, forests, land use and other environmental characteristics
- Population: growth rates, distribution, density and other vital statistics
- National policies: including such factors as Cambodia's Rectangular Strategy for Growth, Employment, Equity and Efficiency – Phase II, Cambodia's National Strategic Development Plan Update 2009-2013, the Cambodia Millennium Development Goals , and the Cambodia REDD+ Strategies (see Annex 2a).
- Economy: including GDP growth, energy, transport, industry, mining, tourism, agriculture expansion, fisheries, waste, health and services sector
- Education: including scientific and technical research institutions
- Other current country indicators such as: sectoral development plans, specific investment programs, and/or adjustment coefficients otherwise derived from such factors and data
- Any information considered relevant by the Party, e.g. information relating to Article 4.8, 4.9 and 4.10 of the UNFCCC. The national circumstances information could be of interest to other national stakeholders (Ministries, donors, etc.) investigating the benefits of specific activities and policies.

In order to establish Cambodia's REL and RL, the assessment on the national circumstances will be focused on three main aspects:

(i) Current country socio-economic conditions: The assessment of current socio-economic condition will be based on a study review of all the available socio-economic data, including those related to the forests of the Cambodia based on the provisional list above, the Assessment of Land-use, Forest Policy and Governance conducted through the Roadmap process (see Component 2a and Annex 2a) and new assessments undertaken as part of the REDD+ Strategy analysis (see Component 2b).

(ii) Sustainable development needs: The assessment of Cambodia sustainable development needs will be based on a study that will indicate all the potential medium term development objectives for Cambodia, as laid out in national planning documents (e.g. the Rectangular Strategy).

(iii) Development of reference scenarios: the establishment of reference scenarios will lead to predictions on the amount and location of future land use and land use changes, and its associated emissions and removals. It will use the results of the socio-economic and sustainable development studies and seek to qualify and quantify the impact of possible future emissions and removals (including those identified in the study on the causes of deforestation).

<u>The Roadmap: Assessment of Reference emission level (REL) and Reference level (RL)</u>

Development of the REL/RL will be led by the MRV/REL Technical Team reporting to the Taskforce and use the national definitions established for MRV (see Component 4). The assessment of the estimates for the historic carbon stock changes will be realized following the methodological indications of the most recent Inter-governmental Panel on Climate Change Good Practice Guidance (IPCC GPGs 2003) and Guidelines (IPCC AFOLU 2006). The estimates will be based on combinations of remote sensing data and field inventory data.

3.1 Historical rates of Land-use and Land-use Change

Cambodia proposes to use Approach 3 under the IPCC for measuring activity data, requiring the collection of spatially explicit information on land use changes and the conversions among land uses.

Existing forest cover assessments for Cambodia are consistent with Approach 3, and the historical baseline should be based on these assessments. Currently, wall-to-wall forest cover assessments are available for 2002, 2006 and 2010 (to be completed in 2011) using similar methods, which may be sufficient for REDD+. The accuracy of these existing assessments will need to be quantified, using either ground-truthing or through acquiring high-resolution imagery from the same time period. Areas may need to be reanalyzed in order to meet quality standards. Given the small size of the country a wall-to-wall methodological approach is probably most appropriate.

The forest cover assessments will also need to be re-analysed based on the stratification that is decided for the MRV system (see Component 4). At a minimum this may involve differentiating flooded forest and mangrove areas. A critical issue concerns how to detect historical forest degradation or enhancement of forest carbon stocks and to stratify products appropriately. This may require further research into methods described in the GOFC-GOLD REDD Sourcebook[66] and approaches proposed in the Winrock report for the Cambodia REDD+ Readiness process[67], and will be contingent on methodological guidance from the IPCC.

The REDD+ Taskforce will need to establish an appropriate historical reference period. Given that recent exploitation of Cambodia's forests started with the declaration of the forestry concessions around 1997, which led to the construction of new roads into forest areas, it might be appropriate to use 1997/1998 as the base year. Use of the 1997/8 period would provide Cambodia with a 12-year baseline with data points every four years. The implications of this would need to be considered further before any decision is taken, and it should be remembered that the UNFCCC negotiation process has yet to provide guidance on the length of an appropriate historical reference period.

The historical baseline should be based on existing data where possible, and should build on the capacity that already exists within the FA to undertake these assessments.

3.2 Historical Emissions and Removal Factors

In order to be able to submit its carbon stock change estimates with a Tier 2 or Tier 3 uncertainty level, Cambodia will have to use the data that could also potentially be used to represent the forest carbon stock present in the different areas starting from the base year that is decided (e.g. 1997/8). The GOFC-GOLD Sourcebook contains recommendations on how to identify forested areas today whose carbon stocks may represent the carbon stock of forests in the base year. For example, historical remote-sensing imagery can be used to identify areas that have been deforested or degraded, and data collected from current forested areas can be used as proxies for the historical carbon stocks in the deforested or degraded areas in the base year.

3.3 Estimate historical GHG emissions

Data from steps 5.1 (activity data) and 5.2 (emissions factors) will need be combined to assess historical greenhouse gas emissions. The uncertainty of these estimates will then need to be assessed.

3.4 Develop future reference level based on national circumstances

The assessment of the different national circumstances is a key element for the application of the UNFCCC principle of "common but differentiated responsibilities" and it is the only factor (criteria) that has been used so far in the context of the UNFCCC to adjust human induced GHG gas related data.

The definition of the Cambodian national circumstances will be established in order to be used to adjust the historic data. This work will be led by the REDD+ Taskforce, in consultation with relevant stakeholders. The assessment of the Cambodian national circumstances will be based on the analysis of the socio-economic data (for examples see above), the REDD+ strategy analysis (see Roadmap Section 3) and on the analysis of future projections of Cambodia development and on potential changes in forest

[66] GOFC-GOLD, 2009, A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gain and losses of carbon stocks in forests remaining forests, and forestation, GOFC-GOLD Report version COP15-1.

[67] Walker, SM, Casarim, F, Harris, N, and Brown, S. 2010. Cambodia REDD+ Roadmap: Development of a Reference Scenario and Design of a Monitoring System. Winrock International, Washington D.C., USA.

land cover. This will require using modelling approaches to predict future land-use change. The impacts of development policies, global trends in demand and prices for Cambodia's land based commodities, and other economic factors will be included in these models. A workshop will be held in this regard, to consult with national and international modelling experts and Cambodian Ministries related to planning and finance. The outcome of this workshop would be a methodology by which the historic emissions can be projected over different time periods and under different economic and development scenarios, taking into consideration such factors as GDP, population growth, past and present agricultural expansion, forest industry growth, sectoral development plans, subnational development plans, specific investment programs, and/or adjustment coefficients otherwise derived from such factors and data.

Setting the Cambodia RL/REL is both a technical and a political challenge. Conseauently this work will be led by the REDD+ Taskforce in consultation with relevant stakeholders. This will require coordination and inputs from relevenat government departments, MRV/REL Technical Team members, national experts and university staff/researchers. National technical experts will be engaged and consulted with for their assistance in developing the data bases and models to derive adjustment coefficients to modify the historical emission levels for developing future trajectories.

3.5 Subnational RLs/RELs

The Cambodia REDD+ implementation framework (see Component 2c) suggests that REDD+ will be implemented using the nested approach, with site or project-level activities in forested areas (e.g. a protected area or community forest) nested within provincial-level (subnational) REDD+ strategies, which contribute to the overall national REDD+ strategy. This requires development of the nested approach to RELs, so that subnational RELs contribute to the national REL. Establishment of the nested approach will require additional studies to understand how subnational RELs might be set, and working with selected pilot provinces to develop subnational RLs/RELs. Provinces with existing pilot REDD+ projects should be prioritised in order to understand how to operationalise the nested approach.

Table 3: Summary of Reference Level Activities and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2011	2012	2013	2014	Total
Quantify activity data (land-use change assessments)	- Trainings in forest cover assessment techniques - 2010 Forest cover assessment - Reclassification/stratification of 2002, 2006 and 2010 assessments - 1998 Forest cover assessment - Quality Control / Quality Assessment of products	$75	$75	$	$	**$150**
Develop historical emission and removal factors for REDD+ related activities	- Estimate historical emissions and removals factors	$	$25	$25	$	**$50**
Develop historical baseline	- Combine activity and forest carbon stock data - Assess uncertainty	$	$50	$	$	**$50**
Develop future reference level for REDD+	- Collate data on drivers of deforestation - Undertake modeling analyses of future trends - Develop proposed reference level(s) - Revise based on external evaluations	$	$150	$150	$	**$300**
Subnational RLs/RELs	- Develop nested approach for subnational RELs - Pilot development of RLs/RELs for	*Included in Demonstration Activities in Component 2c*				**$**

	priority provinces - Documentation of results					
Total		**$75**	**$300**	**$175**	**$**	**$550**
Government		$	$	$	$	**$**
FCPF		**$**	**$**	**$150**	**$**	**$150**
UN-REDD Programme (if applicable)		$50	$225	$25	$	**$300**
Other Development Partner 1 (FAO)		$25	$75	$	$	**$100**
Other Development Partner 2 (name)		$	$	$	$	**$**
Other Development Partner 3 (name)		$	$	$	$	**$**

Component 4: Design a Monitoring System

Box 4-1: COP Decision -/CP.16, National Forest Monitoring System

"71. … (c) A robust and transparent national forest monitoring system for the monitoring and reporting of the activities referred to in paragraph 70 above, with, if appropriate, subnational monitoring and reporting as an interim measure,[7] in accordance with national circumstances, and with the provisions contained in decision 4/CP.15, and with any further elaboration of those provisions agreed by the Conference of the Parties;

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

source: unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf

Box 4-2: Decision 4/CP.15, Methodological guidelines for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

Note: this COP decision pre-dates the COP 16 decision, but provides useful additional detail on the sense of the Parties relevant to MRV design.

"…Requests developing country Parties, on the basis of work conducted on the methodological issues set out in decision 2/CP.13, paragraphs 7 and 11, to take the following guidelines into account for activities relating to decision 2/CP.13, and without prejudging any further relevant decisions of the Conference of the Parties, in particular those relating to measurement and reporting: (a) To identify drivers of deforestation and forest degradation resulting in emissions and also the means to address these; (b) To identify activities within the country that result in reduced emissions and increased removals, and stabilization of forest carbon stocks; (c) To use the most recent Intergovernmental Panel on Climate Change guidelines and guidelines, as adopted or encouraged by the Conference of the Parties, as appropriate, as a basis for estimating anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes; (d) To establish, according to national circumstances and capabilities, robust and transparent national forest monitoring systems and, if appropriate, sub- national systems as part of national monitoring systems that: (i) Use a combination of remote sensing and ground-based forest carbon inventory approaches for estimating, as appropriate, forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes; (ii) Provide estimates that are transparent, consistent, as agreed by the Conference of the Parties;…"

Source: http://unfccc.int/files/na/application/pdf/cop15_ddc_auv.pdf

Objectives

The overall objective of this section is to develop a monitoring system for REDD+ in Cambodia that achieves two sub-goals:

a. Development of a Measurement, Reporting and Verification (MRV) system for forest carbon that allows for transparent and conservative accounting of emissions and removals of CO_2 through time that can be compared against the projected reference level.
b. Development of a monitoring and reporting system for social, environment, governance and other impacts of implementation of REDD+ activities. This should build on the Environmental and Social Management Framework (ESMF) prepared in Component 2d.

Principles

The development of Cambodia REDD+ Monitoring system should...

- Follow the current guidance and guidelines as adopted or encouraged by the UNFCCC and the REDD+ negotiations
- Be implemented by an inter-agency team, respecting the roles and responsibilities of each institution.
- Be simple and cost-realistic to be managed by the national responsible institution(s)
- Be harmonised with the National Forest Inventory under the National Forest Programme

- Follow the UNFCCC decisions on the scope of REDD, noting that this currently only covers forestlands and not agriculture. Key issues include approaches for the inclusion of mangrove, freshwater wetlands and forest plantations.
- Develop standardized definitions of forest class types for Cambodia, noting that this may necessitate reanalysis of earlier national datasets.
- Develop methods to quantify and assess forest degradation
- Build national capacity and ownership
- Based on adaptive management
- Follow a land-based approach, so that emissions and removals can be tracked to a particular land unit such as a community forest or a protected area and that the inventory database can be used for multiple purposes (most of others require "land-based" information). This is necessary in order to track the selling of forest carbon credits.
- Follow standardised boundaries for land units to prevent overlap. This is the responsibility of the Department of Geography of Ministry of Land Management, Urban Planning and Construction, which is a REDD+ Taskforce member.
- Be developed for multiple purposes:
    - REDD+
    - Timber inventories (in Community Forests and Forestry Concessions)
    - Watershed management,
    - Protected Area management and zonation
    - Monitoring biodiversity co-benefits
    - Monitoring social impacts
- Follow Tier 2-level accounting principles for emissions factors at a minimum (under IPCC Framework)
- Follow Activity 3-level accounting principles for activity data (under IPCC Framework)
- Be based on national-level accounting but allow integration of subnational activities within this framework.

4a. Emissions and Removals

Standard 4a the R-PP text needs to meet for this component:
Emissions and Removals

The R-PP provides a proposal and workplan for the initial design, on a stepwise basis, of an integrated monitoring system of measurement, reporting and verification of changes in deforestation and/or forest degradation, and forest enhancement activities. The system design should include early ideas on enhancing country capability (either within an integrated system, or in coordinated activities) to monitor emissions reductions and enhancement of forest carbon stocks, and to assess the impacts of the REDD strategy in the forest sector.

The R-PP should describe major data requirements, capacity requirements, how transparency of the monitoring system and data will be addressed, early ideas on which methods to use, and how the system would engage participatory approaches to monitoring by forest–dependent indigenous peoples and other forest dwellers. It should also address independent monitoring and review, involving civil society and other stakeholders, and how findings would be fed back to improve REDD-plus implementation. The proposal should present early ideas on how the system could evolve into a mature REDD-plus monitoring system with the full set of capabilities.

(FCPF and UN-REDD recognize that key international policy decisions may affect this component, so a staged approach may be useful. The R-PP states what early activities are proposed.)

Key elements of forest carbon MRV for REDD+ implementation

In order to participate to the REDD+ under the United Nations Framework Convention on Climate Change (UNFCCC), the RGC must establish a system of measurement, reporting and verification (MRV) for Greenhouse Gas (GHGs) emissions, including GHGs from the five activities under REDD+[68]. The 15th Conference of the Parties to the UNFCCC adopted a decision on 'Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries' which requires to establish a "robust and transparent national forest monitoring system".

The COP decision states that Parties have "to use the most recent Intergovernmental Panel on Climate Change (IPCC) guidance and guidelines, as adopted or encouraged by the Conference of the Parties, as appropriate, as a basis for estimating anthropogenic forest-related GHG emissions by sources and removals by sinks, forest carbon stocks and forest area changes".

In the IPCC Good Practice Guidance the most common simple methodological approach is to combine information on the extent to which a human activity takes place (called activity data[69]) with coefficients which quantify the emissions or removals per unit activity which are called emission factors (EF)[70]. The basic equation is (see Figure 9): Emissions = Activity Data * Emissions Factor.

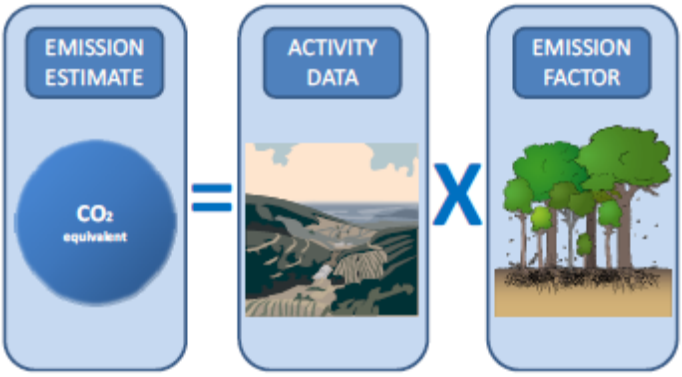


Figure 9. Estimation method

A monitoring system under the UNFCCC will have to provide data on (1) forest area and forest area changes and (2) carbon stock (emission factors) and carbon stock changes.

Designing a measuring, reporting and verification system

Cambodia's MRV system will need to enable the evaluation of anthropogenic emissions by sources and anthropogenic removals by sinks resulting from activities relating to forestry. Based on decision 4/CP.15 of the UNFCCC Conference of the Parties it will need to be developed in accordance with the 2006 Guidelines of the IPCC for national inventories of GHGs. A comprehensive MRV system for Cambodia should be composed of four major components for measuring GHG emissions (see Figure 10):

(i) A monitoring system of forest cover using remote sensing (part of the 'M')
(ii) A system for measuring carbon on the ground in the different forest types (part of the 'M')
(iii) Reporting through the GHG inventory of the RGC (the 'R')
(iv) Verification of the data through a transparent process by the UNFCCC (the 'V')

[68] (i) reducing emissions resulting from deforestation; (ii) reducing emissions resulting from forest degradation; (iii) the role of conservation; (iv) the role of sustainable management of forests, and (v) the role of enhancement of forest carbon stocks.
[69] Activity data is defined as 'Data on the magnitude of human activity resulting in emissions or removals taking place during a given period of time'.
[70] Emission factors is defined as 'A coefficient that relates the activity data to the amount of chemical compound which is the source of later emissions'.

Design of the MRV system for forest carbon

As shown in Figure 10, emission estimates for the MRV system will be based on two types of measurements: (1) activity data using a Satellite Land Monitoring System and (2) data on emission factors through a national forest inventory (NFI).

(1) Satellite Land Monitoring System. The IPCC Good Practice Guidance for LULUCF presents the following three approaches for obtaining activity data: (i) only identifying the total area for each land category (approach 1); (ii) tracking of land-use changes between categories (approach 2); and (iii) tracking land-use changes using sampling or wall-to wall mapping techniques (approach 3). 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), hence Cambodia proposes to use this approach. Approach 3 implies the use of geographical explicit data, which realistically requires the use of satellites. Thus the estimation of the activity data (land use category area extension and area changes in land use category) will be realized through a monitoring system based on remote sensing techniques that should be able to provide regular activity data estimates. This is consistent with Cambodia's current forest cover assessments (see Component 3). The NFI field activities and measurements will contribute to the forest area assessment mainly as a training data set for remote sensing image analysis and as ground verification.

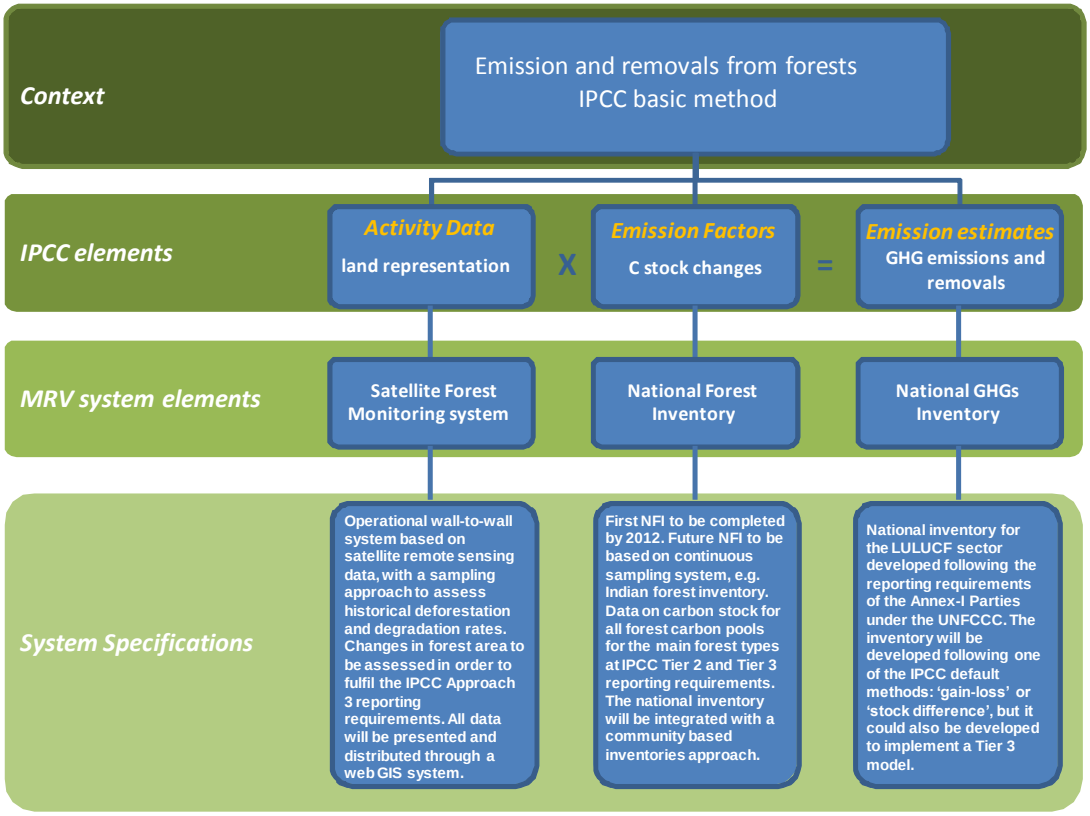


Figure 10. The three basic "carbon-related" MRV elements: (i) a Satellite Land Monitoring System; (ii) a National Forest Inventory; (iii) National GHG Inventory, and their relationship to the IPCC methodologies.

(2) Emissions factors through the Cambodia National Forest Inventory, which is mandated under the National Forest Programme. For emissions factors, following the methodological approach suggested by the IPCC, Cambodia must at least aim to establish a GHG inventory with known uncertainties on the estimations of carbon stock variations (Tier 2 or Tier 3). To meet this condition, a country must have the following:

(i) estimations of emissions factors specifically for this country;

(ii) multi-temporal inventory data; and
(iii) uncertainties associated with the estimates of the reported data.

Emissions or removals resulting from land conversions are manifested in changes in ecosystem carbon stocks in the five IPCC eligible pools: aboveground biomass, belowground biomass, litter, deadwood and soil organic carbon. In a first instance, the Cambodia's MRV system aims for Tier 2 accuracy. Nevertheless, the current approach enables the implementation of an MRV system that will allow Cambodia to assess and report on carbon stock variations at a Tier 3 in the future. The way in which the MRV system will be built for Cambodia will aim to minimize MRV system costs, but at the same time obtain a system that provides reliable and solid data at the national level.

Uncertainty

Uncertainty estimates are an essential element of a complete MRV system and for an inventory of GHG emissions and removals. They should be derived for both the national level reporting and trend estimates, as well as for the component parts such as emission factors, activity data and other estimation parameters for each key source category. Uncertainties should be reduced as far as is practicable during the measurement process, and it is particularly important to ensure that the model and the data collected are fair representations of the real forest status. The uncertainty analysis should be seen, first and foremost, as a means to help prioritize national efforts to reduce the uncertainty of inventories in the future, and guide decisions on methodological choice. For this reason, the methods used to attribute uncertainty values must be practical, scientifically defensible, robust enough to be applicable to a range of categories of emissions by source and removals by sinks, methods and Cambodia's national circumstances.

REDD+ and national territory stratification

In order to facilitate the reporting under the Convention and following the 2003 IPCC LULUCF guidance Countries should stratify their national territory into managed and un-managed land, as a way to focus on human-induced emissions. Countries will only be requested to report on any emission/removal that affects their human-influenced land (= managed land). Further on, the IPCC guidance also requests to stratify the land into more homogeneous units based on their carbon contents. In the case of forest land uses, this might imply stratifying by forest classes (e.g. evergreen lowland rain forests), but also stratifying by different human forest management activities that might result in forest strata with more homogeneous forest carbon stocks (e.g. evergreen lowland rain forests undergoing sustainable management of forests, or undergoing degradation, or undergoing conservation, etc).

The stratification facilitates the monitoring of the selected REDD+ activities in the country (e.g. by enabling the country to track land uses that remain in the same land use and forest land uses that change into another land uses), and the reporting of their forest-related emissions.

The forest classes adopted will need to be consistent with those approved in the National Forest Programme (2010) approved by the RGC.

Figure 11 suggests a possible stratification of the land following these considerations for Cambodia. This will need:

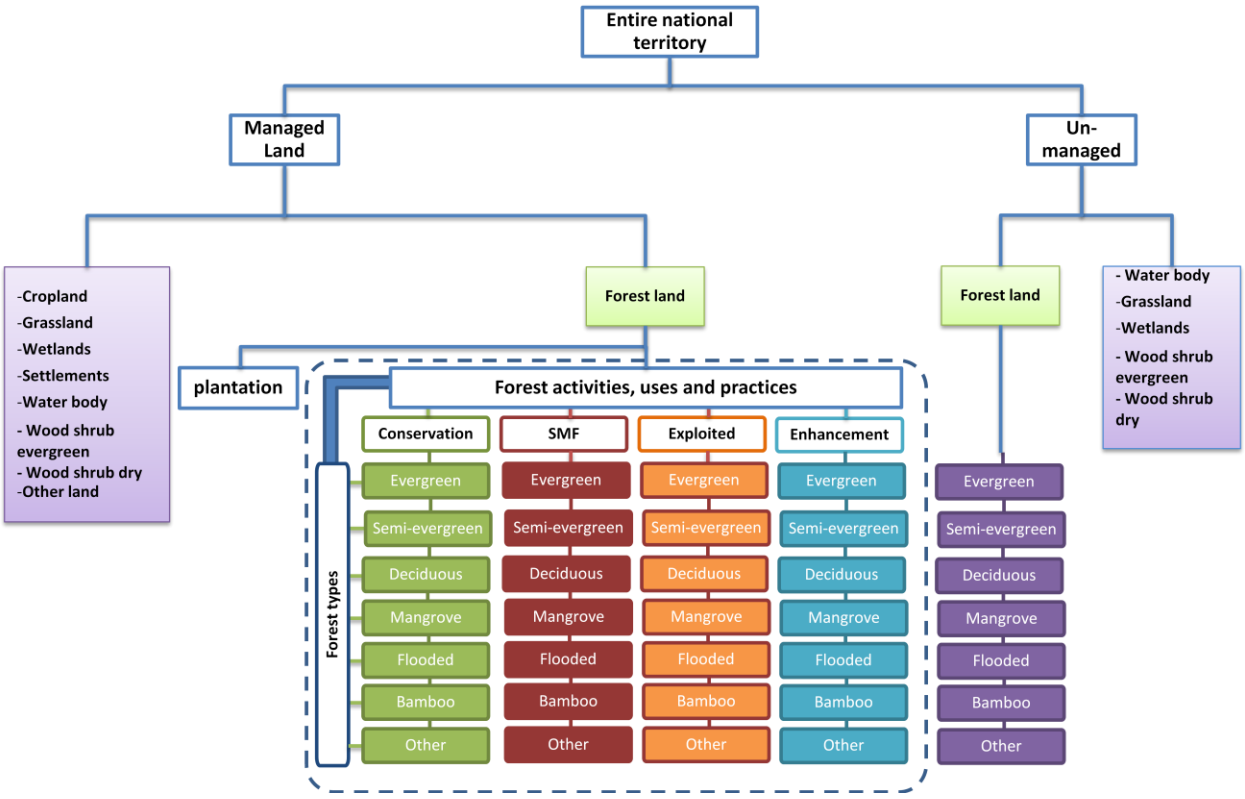


Figure 11. Potential land use classification/stratification system for Cambodia's national territory, based on land categories defined in the National Forest Inventory of the Kingdom of Cambodia, Final Forest Resources Statistics Report, 1996. Forest land will be defined in a coherent way with the requirements for National Greenhouse Gas Inventory Reporting under the UNFCCC.

REDD+ monitoring within the Cambodia National Forest Inventory

Development of a National Forest Inventory is mandated under the National Forest Programme (NFP), Implementation Programme 2 ('Forest Resource Management and Conservation Programme'). The NFP states that:

> "A NFI will be developed and updated regularly to monitor the overall effect of ongoing forestry reforms on quantity and quality of forest resources. The programme will minimize the costs by developing a systematic, reliable and cost-effective national forest inventory methodology. In this process FA will:
> - Develop a guideline on making national inventory (including inventorying of herbs, sprouts, seedlings, saplings, timber and biomass)
> - Identify capacities with expertise in multi-forest resource inventories
> - Develop cost-effective methods to assess quantity and quality of forests (including inventorying of herbs, sprouts, seedlings, saplings, timber and biomass stocks, NTFPs, carbon, environmental services, endangered species etc).
>
> The national forest inventory will at the same time be the FA's main tool to monitor Cambodia's millennium development goal on maintaining a 60 percent forest cover as well as it will have a section on carbon accounting."

Development of a NFI is also a key aspect of monitoring for REDD, under Implementation Programme 6 of the NFP ('Sustainable Forest Financing') and the NFP Monitoring and Reporting System (Implementation Programme 7) which has yet to be developed. Under the REDD+, the NFI is a key element for the reporting forest GHG inventories. However, the NFI will also provide information on timber volume, biodiversity, biomass, bio-energy etc.

The data provided by a National Forest Inventory in Cambodia will be used for several purposes, such as:

1. To determine logging quotas and Government policy regarding logging, based on available timber resources and trends. Commercial logging has been banned in Cambodia since 2002 with the exception of annual logging coupes that have been established in recent years to meet domestic consumption needs. The National Forest Programme (NFP) of the Royal Government sets out an ambitious target of 50% of wood production to be certified.
2. To determine appropriate Government policy over the role of wood energy and biofuels and their medium-term domestic impacts. Research done over the past few years suggests that much of Cambodia's demand for wood energy for brick-making and construction has been met by the scrubbing of old rubber plantations. As this supply becomes exhausted, natural forests are likely to become the primary source of wood energy, as has already happened in some places (e.g. Phnom Aural).
3. To determine appropriate Government policy over conservation and watershed forests for ecosystem services. In the next few years a large number of hydropower projects are expected to go ahead. In this context, the importance of watershed forests in the Elephant mountains, the Cardamoms and other places is likely to increase. Effective watershed management is key to proper management of dams and their reservoirs, and can prolong the operation of the dam.
4. To monitor the impact of climate change on land-use policy, which is likely to be become more important as the rate of climate change increases. Changing weather patterns, such as rainfall, may have an impact on forest structure and composition.

In addition, the Cambodia NFI will assess carbon stocks and carbon stock changes (i.e. emission factors) for the REDD+ mechanism under the United Nations Framework Convention on Climate Change (UNFCCC) as part of the MRV system. The NFI field activities and measurements may also contribute to the forest cover assessment part of the MRV system mainly as a training data set for remote sensing image analysis and as ground verification.

Institutional, governance and participation arrangements

Preparation of the MRV system will see institutional and capacity building arrangements in the relevant national institutions. The objectives are to manage the following at the national level on a permanent basis: (i) the national forest inventory, (ii) satellite land monitoring system and (iii) the GHG inventory reporting.

Major training needs identified for Cambodian Government agency staff include:

1. Staff expertise and training with regard to UNFCCC and the IPCC guidelines;
2. Training of qualified staff with regard to GIS and remote sensing as well as managing the information produced;
3. Training qualified staff for field measurements of forest carbon stocks and to manage the information produced;
4. Establishing appropriate offices with necessary equipment both in Phnom Penh at in the field;
5. Training of qualified staff to prepare national GHG reporting reports that will be requested by the UNFCCC.

Establishing these capacities is necessary to enable the country to be logistically capable of undertaking MRV.

Current UNFCCC Reporting by Cambodia

The first National Communication to the UNFCCC occurred in 2002 (for year 1994) and the National Adaptation Programme of Action to Climate Change (NAPA) was approved by the Government in 2006. The second national communication to the UNFCCC (for year 2000) is currently being prepared using a combination of new existing country specific data for Cambodian forests. Implementation of the work proposed in this document will be able to feed into producing an improved national communication in the future. The Department of Climate Change of the Ministry of Environment is responsible for reporting to the UNFCCC.

<u>REDD+ Roadmap: Development of the Monitoring System for forest carbon for REDD+</u>

The REDD+ MRV system for forest carbon will need to take into account Cambodia's candidate REDD+ Strategies (developed under Component 2b) if it is to be able to evaluate how effective they have been at reducing GHG emissions and/or increasing removals. However, the implementation of an individual

REDD+ strategy may have indirect rather than direct impacts on emission reductions. For example, an improvement in forest governance may have profound impacts on how forests are managed in Cambodia, yet developing a specific indicator to ascribe the impact of this action to reducing emissions or enhancing removals of CO_2 would be difficult. The linkages between MRV and the REDD+ Strategies will need to be evaluated early in the development of the MRV system.

The MRV section is composed of two phases — a MRV development phase and a MRV implementation phase. The outcome of the implementation of this section will be a functional MRV system for evaluating the performance of REDD+ interventions in Cambodia.

4a.1 Establish institutions for MRV/REL with adequate capacity

In order to coordinate the development of the monitoring system the Cambodia REDD+ Taskforce will establish an MRV/REL Technical Team. This team will be responsible for coordinating the technical activities related to the design of the national forest monitoring system, although final decision-making will remain with the Taskforce. The team will be composed of key representatives from the main Government agencies responsible (FA, GDANCP, FiA, MLMUPC), other relevant institutions, external experts, and local communities. The management structure for the MRV/REL Technical Team will need to be developed and roles and responsibilities of various institutions defined to ensure that groups are working together towards a common goal. A training and capacity-building needs assessment will need to be undertaken for the MRV/REL Technical Team, technical staff in the FA/MAFF, GDANCP/MoE, FiA/MAFF and Department of Geography/MLMUPC who will be undertaking the analyses, field staff from local management units (e.g. Protected Areas and Protection Forests) and local communities. Based on the needs assessment targeted trainings should then be provided. A suitable office will need to be established to house the MRV/REL Technical Team. A full-time international MRV/REL advisor will be recruited to support the team in its work, and this advisor will be based in the Taskforce Secretariat.

Representatives of local communities and local management authorities (protected areas, forestry units, etc.) will need to play a key role in the MRV/REL Technical Team, because these stakeholders will be important for collecting information on both area changes and carbon stock changes that are not detectable using remote sensing imagery at the local scale. The MRV/REL Technical Team, especially FA/MAFF, MoE and FiA/MAFF representatives, will need to compile the data collected at the local level and across the communities. The identification of technologies commonly and widely used across the communities to improve compilation and storing of this data must be assessed.

4a.2 Collation and harmonization of existing data

Cambodia already has considerable data on forest carbon stocks that could be used as part of the basis for the future design of the national forest inventory. This data will need to be collated and harmonized to identify key gaps and where further analysis or data collection is required. Since data are held by several Government agencies these activities will be coordinated by the MRV/REL Technical Team under the direction of the Taskforce.

4a.3 Develop the Cambodia Monitoring system plan for forest carbon

Under the direction of the Taskforce and with advisors and other technical experts, the MRV/REL Technical Team will develop a plan for the REDD+ monitoring system focusing on forest carbon. The monitoring system plan will be based on the principles established in this Component (above). The design of the monitoring plan will need to consider the REDD+ strategies that are being implemented, and the appropriate scale to the REDD+ strategies. This will probably involve local communities and line agency subnational management units (e.g. protected areas) in the monitoring plan, as appropriate. The monitoring plan design should be based on appropriate standard operating procedures for measuring activity data (4.4) and emissions and removals factors (4.5), and include measures for checking data quality and accuracy. The design will need to take into account the nested approach and integrating subnational monitoring into the national system.

Development of the REDD+ monitoring system will require the MRV/REL Technical Team to cooperate with the REDD+ Taskforce and key Ministries (especially MAFF and MoE) to set national definitions that will be used for REDD+. These definitions will include:

- National Forest Definition. The definition of forest that Cambodia has submitted to the UNFCCC is based on the following thresholds: minimum crown cover of 10%, minimum height of 5 m and minimum area of 0.5 ha. Using a 10% minimum crown cover is however difficult to detect using available remote-sensing imagery. It is therefore recommended to revise the minimum crown cover to 20%, keeping the other thresholds the same. This possible change would need to be extensively discussed and consulted before any changes were made, and possible implications of the change would need to be evaluated before it was made. Forest definitions also have to be harmonized with the National Forest Programme.

- Forest classes. The different land-use assessments have used varying definitions of Cambodia's forest types. A single classification system for REDD+ purposes will need to be developed, and classifications should then use this standard system. The classification system will need to follow that in the National Forest Programme. To facilitate reporting to the UNFCCC, the classification system will need to be consistent with the IPCC land-use categories. The system adopted may also need to be consistent with other international reporting (e.g. Forest Resources Assessment). Historical datasets may need to be reclassified based on these revisions.

- Reference time period. The reference time period for REDD+ should be defined (see Component 3).

- Carbon pools. Under the IPCC guidelines, all carbon pools need to be reported but it is possible to use a lower tier level if a particular pool is not defined as a key category (i.e. is responsible for less than 5% of greenhouse gas emissions or removals). Consequently, it may be necessary to investigate which carbon pools should be measured to Tier 2 or 3 level (i.e. requiring field measurements). Current pilot REDD+ projects are mainly measuring aboveground and belowground tree biomass and dead wood. The potential benefits of also measuring soil carbon in particular will need to be investigated, as this is expensive.

The stratification system used for the MRV system will be based on the forest classes decided and the five REDD+ activities (deforestation, forest degradation, conservation, sustainable management of forests and enhancement of forest carbon stocks). A critical issue concerns how to detect forest degradation or enhancement of forest carbon stocks and how to stratify products appropriately. This may require further research into methods described in the GOFC-GOLD REDD Sourcebook, and will depend on future methodological guidance from the UNFCCC.

4a.4 Support a national forest cover monitoring system to quantify activity data for REDD+ related activities

Building on existing experience with forest cover assessments, Cambodia will establish a national forest cover monitoring to quantify activity data for REDD+ MRV. Assessments will be primarily undertaken by the Forestry Administration, but in consultation with other line agencies through the MRV/REL Technical Team. All products will need to be checked to ensure they are of sufficient accuracy, using either ground-truthing or through acquiring high-resolution imagery from the same time period. Data from the NFI (see 4.5) might be suitable for this purpose. All products will be classified according to the stratification system decided in 4.3.

4a.5 Establish a national forest inventory system to quantify emissions and removal factors for REDD+ related activities.

The NFP prioritizes development of a National Forest Inventory (NFI), to include assessment of timber stocks. For REDD+, Cambodia therefore proposes to use a multi-purpose NFI that collects national statistics appropriate for timber inventories (e.g. by community forests or concessionaires), the necessary data to assess REDD+ emissions factors, and other needs such as data on watersheds. Support for implementation of the NFI system designed may be available through support to the NFP. Field measurements will be undertaken by the FA (for the Permanent Forest Estate), GDANCP (for Protected Areas) and FiA (for flooded forests and mangroves), and local communities or management units as appropriate.

National-level protocols for forest carbon inventories will need to be developed by the MRV/REL Technical Team following available reference and training resources (e.g., IPCC 2003 GPG LULUCF, World Bank's BioCarbon Sourcebook for LULUCF, GOFC-GOLD Sourcebook, etc.). These national-level

protocols could be based on the Standard Operating Procedures already established for the different REDD+ pilot projects, especially in Oddar Meanchey, Seima Protection Forest and in the Southern Cardamoms. The protocols would need to be adapted include the multi-purpose objectives of the NFI, including sampling of timber stocks, for example. Different protocols may need to be developed for different forest areas: for example, in order to integrate with the requirements of community forestry management agreements.

A national sampling plan for forest carbon inventories will need to be developed by the MRV/REL Technical Team. It is proposed that a three-stage process is used to design the NFI sampling:
(i) Forest area pre-assessment and stratification, following the stratification system decided under 4.3.
(ii) Pre-sampling and examination of existing forest carbon stock data (from 4.2), in order to determine the variance of the data collected and to obtain initial estimates of emission factors. This information is then used to determine the final sampling plan, based on the gaps where further data collection is required to meet accuracy and precision levels decided by the MRV/REL Technical Team.
(iii) Final sampling and assessment, based on the sampling plan. Data collection should focus only on lands that underwent change or are expected to undergo change in the future in order to minimise unnecessary data collection. These areas are:

- For forests, only the areas that underwent deforestation/degradation/disturbance are relevant;
- For soils, only the soils carbon stocks needed for areas converted to/from annual cultivation.

Results from the field measurements will be used to estimate emission factors for various land cover changes (deforestation, degradation, forestation, enhancement of carbon stocks) using the IPCC GPG framework, along with the estimated uncertainty around each emission factor.

This three stage approach consists of a learning-by-doing process but simultaneously resources and efforts can be better targeted if priorities evolve or resources are scarce. Different sampling designs can take advantage of pre-existing knowledge of the forest structure (and other information) to improve precision or reduce the cost of an inventory. During pre-sampling, preliminary statistics of different forest strata will be assessed. These preliminary statistics will be used to define the final sampling strategy but also to produce conservative estimates of emissions factors. The overall approach of the NFI's final sampling stage will be to use a combination of temporary and permanent plots. As for the pre-sampling stage, there will be an optimal allocation of plots combined with a cost-effective and statistically sound solution to sample in 'managed' unexploited forests and in 'unmanaged' (intact) forests.

As with the activity data, estimating emissions factors for forest degradation may require additional consideration. Tree removals and dead wood for charcoal production, over grazing of understory reducing regeneration, and fire all contribute to forest degradation. However, little data are available in Cambodia on how these degradation activities affect the carbon stocks in which pools. A first step during the REDD+ implementation phase will be to review the literature to determine if there are any studies on related topics in similar environments (including neighboring countries). In addition, field studies will be necessary to determine the effect these activities have on carbon stocks and to assist in determining which additional pools will need to be included. These studies would need to build on existing research, in particular by GERES and Japanese researchers.

A standard, uniform database should be designed. This should be developed with the specific purposes of the NFI and in parallel with the development of the field sheets in order to facilitate data inputting and error checking. The database could include carbon stock lookup tables (i.e. development of national specific values). Modelling tools will be developed and articulated with the REDD+ database in order to develop the data on emission factors (based on dendrometric measurement, allometric equations, biomass estimation, carbon stock conversion and carbon stock comparison in space and time). Generalised allometric equations will need to be verified for Cambodia based on field sampling.

4a.6 Report national estimate of GHG emissions during monitoring period and subject this estimate to international verification

Current Greenhouse Gas Inventory reporting is undertaken by the Department of Climate Change within GDANCP. Under this component, the lead Government agencies (FA, GDANCP and FiA) will be trained in reporting for REDD+, and systems will be established to allow such reporting to take place, including systems for Quality Assessment/Quality Control and measurement of uncertainty. It is important to assess the quality of measurements taken in the field, data compilation and data analysis in order to have error

estimates and improve future measurements. The IPCC's Guidelines for National Greenhouse Gas Emissions (2006) already provide clarifications regarding quality control (QC) and quality assurance (QA).

The outcome of the monitoring system will be synthesized and compared against the reference level to provide timely reporting of emissions/removals for REDD+ activities. The MRV implementation plan will be developed to allow for complete transparency so as to be open for verification and peer review. The database developed under 4.5 could be adapted to calculate changes in GHG emissions and removals to ease reporting.

4b. Multiple Benefits, Other Impacts, and Governance

Box 4-3: COP Decision -/CP.16: Reporting on Safeguards

Par. 71 calls for: *"(d) A system for providing information on how the safeguards referred to in annex I to this decision are being addressed and respected throughout the implementation of the activities referred to in paragraph 70…"*

Annex I Guidance and safeguards…:

… "2. When undertaking activities referred to in paragraph 70 of this decision, the following safeguards should be promoted and supported: …
(e) Actions are consistent with the conservation of natural forests and biological diversity, ensuring that actions referred to in paragraph 70 of this decision are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits"

source: unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf

Standard 4b the R-PP text needs to meet for this component:
Other Multiple Benefits, Impacts, and Governance:

The R-PP provides a proposal for the initial design and a workplan, including early ideas on capability (either within an integrated system, or in coordinated activities), for an integrated monitoring system that includes addressing other multiple benefits, impacts, and governance. Such benefits may include, e.g., rural livelihoods, conservation of biodiversity, key governance factors directly pertinent to REDD-plus implementation in the country.

(The FCPF and UN-REDD recognize that key international policy decisions may affect this component, so a staged approach may be useful. The R-PP states what early activities are proposed.)

Background

Component 4b outlines a monitoring and reporting system for social, environment and other impacts of increased forest cover resulting from implementation of REDD+ activities. Increased forest cover will also protect soils from erosion, increase biodiversity, and provide timber and fuel for local communities.

REDD+ strategies to reduce deforestation and degradation will have substantial social and environmental impacts beyond climate change and carbon accumulation. Those impacts will be felt at the national level (for example through improved water supply, quality and hydropower) and at local levels (for example through maintenance of forest areas and the resources they provide, including NTFPs) and at various levels in between through other benefits such as jobs related to the forest industry, forest based tourism, etc. Some individuals or groups may be negatively impacted by the proposed REDD+ strategies and these impacts must also be identified and mitigated. For example, stopping agricultural encroachment and expanding the forest area will leave less land available for food crop production, while addressing unsustainable use of forests will reduce the quantities of forest products available for harvest in the short term. These social and environmental and other impacts of the REDD+ strategies will be monitored.

Component 4b builds on the Environmental and Social Management Framework (ESMF) prepared in Component 2d and the SESA of the candidate REDD+ Strategies performed under Component 2b. It will put into place a monitoring methodology framework for environmental, socio-economic and governance components.

Existing National Data Gathering Systems in Cambodia

A very large number of joint Government/NGO conservation projects exist in Cambodia, many of which have been supporting Government agencies and local communities with sustainable forest management and biodiversity conservation for 10 years or more. Several organizations, particularly the Wildlife Conservation Society (WCS), the World Wildlife Fund (WWF), Conservation International, Birdlife International and Fauna and Flora International, have undertaken in-depth and often repeated assessments of biodiversity indicators and ecosystem services for many of Cambodia's large forested landscapes. In addition, WCS has long-term environmental monitoring programs in place for three landscapes that include population assessments of key species. Presence-absence indicators of key elements of biodiversity are also used widely. Many of these Government/NGO programs undertake regular surveys of socio-economic indicators as well, for example in order to assess the impact of establishing protected areas or community-based natural resource management sites.

Government agencies and NGOs often use the Management Information SysTem (MIST-GIS)[71] to store biodiversity, socio-economic and governance indicators. MIST is a spatial **M**anagement **I**nformation **S**yst**t**em, custom-made for use in protected area management. It is an easy to use, flexible and powerful tool to improve management, comprising a client/server application programme **and** associated data collection procedures. MIST provides managers with easy access to information for planning, decision-making and evaluation. MIST was developed as part of the GTZ project 'Advisory Services to Uganda Wildlife Authority' (1997-2002). In January 2004 the World Bank-GEF Biodiversity and Protected Areas Management Project introduced MIST to Cambodia, and it is now used, both by GDANCP/MoE and the FA. Scaling up MIST to cover more forested areas could be a useful way to measure REDD+ impacts. MIST is also now widely used for protected area management throughout Southeast Asia.

Several of the landscape programs undertake regular analyses of land-use change as a compliment to the national forest cover assessments. High-quality analyses have been done for three pilot REDD+ projects: in Oddar Meanchey province (TGC/PACT/FA), in Mondulkiri province (WCS/FA) and in Koh Kong province (ONFi/Wildlife Alliance/FA). The reference regions for these projects usually cover some or all of the province, and might provide a useful platform to develop provincial-wide monitoring systems.

Regular national poverty assessments and population censuses have been supported by the World Bank and other donors. Annual assessments of a large number of socio-economic indicators are undertaken by village chiefs and submitted to Commune Councils for entry into the Commune Database. This includes a record of the number of households and people, and notes on in-migration. Migration is a significant cause of deforestation, and research suggests that rates of migration might be a useful indicator of deforestation pressure.

Programme 3 (FLEG) of the National Forestry Programme includes a focus on forest crime monitoring and report.

Some Possible Monitoring Indicators used currently

Environmental

- Forest Cover and land-use change
- Globally Threatened Biodiversity, listed on the IUCN Red List
- Presence-absence assessments of key species
- Population assessments
- Water quality
- Watershed protection

Socio-economic

- Area of forest under community management (e.g. CF, CFi, CPAs, etc)

[71] http://www.ecostats.com/software/mist/mist.htm

- Livelihood indicators
- Poverty scores
- Population growth
- In-migration statistics
- Other Commune Database statistics

Governance

- Incidences of illegal activities, e.g. measured by MIST
- Forest Crime Monitoring by the FA

Workplan for the design of a Monitoring System

Design of a monitoring system for other benefits and impacts of the REDD+ will need to involve consideration of:

• Environmental benefits and impacts of REDD+ implementation, e.g. on biodiversity, water quality, watershed protection, etc.

• Socio-economic impact of the REDD+ Strategy on local forest-dependent and rural communities on employment, poverty reduction, health, education, gender, and food security.

• Monitoring of governance indicators during REDD+ Implementation.

Monitoring plans for each of these will need to be developed, baseline data collected and monitored as the REDD+ program is implemented. This work will be led by the Consultation and Safeguards Technical Team.

4b.1 Environmental Monitoring

The outputs of the SESA will be used to gather the relevant data. This will include defining biodiversity indicators, and creating a biodiversity monitoring system using indicators of a recognized standard, e.g. IUCN Red List. The monitoring system will use existing site-based biodiversity and species monitoring programs established in protected areas and other forest management units by conservation projects throughout Cambodia. The stakeholders responsible for such monitoring will be identified by the Consultation and Safeguards Technical Team, and the existing capacities and resources will be examined and the capacity and resource needs established.

4b.2 Socio-economic Monitoring

The socio-economic impact of the REDD+ Strategy on local forest-dependent and rural communities on employment, poverty reduction, health, education, gender, and food security according to existing indices (e.g. Human Development Index) will be monitored. The monitoring system developed will assess the distribution of costs and benefits for implementation of REDD+ activities. The stakeholders responsible for such monitoring will be identified. The existing capacities and resources will be examined and the capacity and resource needs established.

4b.3 Governance Monitoring

Limited institutional capacity, scarcity of resource, illegal forest logging, and forestland clearing were identified as the major drivers of deforestation and degradation and a number of candidate strategies are proposed to address this. Improved governance measures to enforce local regulations and support programs are considered essential to ensure the other measures have a lasting impact. Monitoring the impact of governance measures requires assessment of the governance measures and an assessment of their impact on carbon accumulation.

The performance of implementation of REDD-specific governance bodies will be monitored along with the enforcement of laws relating to forest governance in respect of transparency and accountability, quality of and respect for procedures and preventive measures to reduce illegal activities. The methods used to

ensure free prior and informed consent will be assessed and indicators developed including meeting minutes, meeting attendance list of various stakeholders, resolutions, work plans and activity reports.

Table 4-1: Summary of Monitoring Activities and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2011	2012	2013	2014	Total
Establish institutions for MRV/REL with adequate capacity	- Regular meetings of MRV/REL Technical Team - Provision of Technical support and advice - Determine appropriate institutions and their roles in the MRV system - Consult on the role of local communities and subnational management units in the MRV system - Training and capacity needs assessments - Trainings on MRV and IPCC guidelines, National Forest Inventories, Remote sensing and satellite monitoring systems - Provide adequate equipment - Provide the technical manuals and backgrounds to achieve accurate carbon stock assessment and report activity data	$180	$335	$335	$180	**$1,030**
Collation and harmonization of existing data	- Collect existing data on forest cover and forest carbon stocks - Review the extent to which this data is suitable for REDD+ - Harmonization of data according to national and international standards	$25	$	$	$	**$25**
Develop the Cambodia Monitoring system plan for forest carbon	- Review national forest definitions in the NFP and for the CDM and provide recommendations for revisions as appropriate. - Determine national forest definitions, forest classes, carbon pools and reference period to be used - Determine the stratification system to be used - Review monitoring system needs and programs in other countries - Design monitoring system including integration sub-national projects - Define the role of local stakeholders	$100	$35	$	$	**$135**
Establish a national forest cover monitoring system to quantify activity data	- Trainings in forest cover assessment techniques - Develop and finalise the protocols for monitoring activity data - Assessment of how to measure areas of forest degradation - Implementation of the MRV plan for activity data by national and, as appropriate, subnational units - Quality Control / Quality Assessment of products	$	$1,100	$50	$50	**$1,200**
Establish a national forest inventory system to quantify emissions and	- Training on national forest inventory methods - Assessment of how to estimate emissions factors due to forest degradation - Review and revise as appropriate allometric equations to estimate biomass and carbon stocks from tree measurements	$30	$2,200	$320	$	**$2,550**

removal factors	- Design multi-purpose National Forest Inventory - Undertake pilot field data collection from plots (pre-sampling) - Develop and finalise field sampling design - Develop national and subnational databases of all information on forest carbon stocks - Implementation of the MRV plan for carbon stocks by subnational management units - Quality Control / Quality Assessment of products					
Report national estimate of GHG emissions during monitoring period	- Training on GHG reporting - Combine activity and forest carbon stock data - Assess uncertainty - Develop and submit reports - Subject reports to international verification	$	$40	$40	$20	**$100**
Monitoring Multiple Benefits, Other Impacts, and Governance		$	$100	$100	$	**$200**
Total		**$335**	**$3,760**	**$845**	**$300**	**$5,240**
Government		$15	$30	$30	$15	**$90**
FCPF		**$**	**$**	**$540**	**$260**	**$800**
UN-REDD Programme (if applicable)		$155	$555	$250	$	**$960**
Other Development Partner 1 (FAO)		$140	$150	$	$	**$290**
Other Development Partner 2 (JICA)		$25	$25	$25	$25	**$100**
Other Development Partner 3 (Government of Japan)		$	$3,00	$	$	**$3,000**

Component 5: Schedule and Budget

Standard 5 the R-PP text needs to meet for this component:
Completeness of information and resource requirements

The R-PP proposes a full suite of activities to achieve REDD-plus readiness, and identifies capacity building and financial resources needed to accomplish these activities. A budget and schedule for funding and technical support requested from the FCPF and/or UN-REDD, as well as from other international sources (e.g., bilateral assistance), are summarized by year and by potential donor. The information presented reflects the priorities in the R-PP, and is sufficient to meet the costs associated with REDD-plus readiness activities identified in the R-PP. Any gaps in funding, or sources of funding, are clearly noted.

Table 5: Schedule and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2011	2012	2013	2014	Total
Component 1: Organise and Consult	1a. National Readiness Management Arrangements	$250	$670	$370	$205	**$1,495**
	1c. Consultation and Participation Process	$140	$260	$130	$70	**$600**
Component 2: Prepare the REDD+ Strategy	2a. Assessment of Land Use, Forest Law, Policy and Governance	$	$30	$	$	**$30**
	2b. REDD+ Strategy Options	$275	$735	$280	$	**$1,290**
	2c. REDD+ Implementation Framework	$530	$1,195	$875	$	**$2,600**
	2d. Social and Environmental Impacts	$50	$25	$25	$	**$100**
Component 3: Develop a Reference Level		$75	$300	$175	$	**$550**
Component 4: Design a Monitoring System	4a. Emissions and Removals	$335	$2,710	$745	$250	**$4,040**
	4b. Multiple Benefits, Other Impacts, and Governance	$	$50	$100	$50	**$200**
Total		**$1,655**	**$5,975**	**$2,700**	**$575**	**$10,905**
Government		$70	$150	$145	$45	**$410**
FCPF		**$50**	**$1,050**	**$2,005**	**$475**	**$3,600**
UN-REDD Programme (if applicable)		$785	$1,605	$415	$20	**$2,805**
Other Development Partner 1 (UNDP)		$450	$500	$	$	**$950**
Other Development Partner 2 (FAO)		$165	$235	$	$	**$400**
Other Development Partner 3 (JICA)		$135	$135	$135	$35	**$440**
Other Development Partner 4 (Government of Japan)		$	$2,300	$	$	**$2,300**

Component 6: Design a Program Monitoring and Evaluation Framework

Standard 6 the R-PP text needs to meet for this component:
Design a Program Monitoring and Evaluation Framework

The R-PP adequately describes the indicators that will be used to monitor program performance of the Readiness process and R-PP activities, and to identify in a timely manner any shortfalls in performance timing or quality. The R-PP demonstrates that the framework will assist in transparent management of financial and other resources, to meet the activity schedule.

An existing Programme M&E framework and risk management framework were designed as part of the formulation of the Cambodia UN REDD National Programme and are presented in Tables 12 and 13.

The majority of costs of Programme M&E will be covered by UNDP under its role as Programme Assurance or by the individual Components (1-4). No separate budget is therefore allocated for Programme M&E here. This will be revised later if additional funds are required.

Table 6: Summary of Program M&E Activities and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2011	2012	2013	2014	Total
		$	$	$	$	**$**
		$	$	$	$	**$**
Total		**$**	**$**	**$**	**$**	**$**
Government		$	$	$	$	**$**
FCPF		**$**	**$**	**$**	**$**	**$**
UN-REDD Programme (if applicable)		$	$	$	$	**$**
Other Development Partner 1 (name)		$	$	$	$	**$**
Other Development Partner 2 (name)		$	$	$	$	**$**
Other Development Partner 3 (name)		$	$	$	$	**$**

Table 12: Program Monitoring Framework (JPMF) [adapted from Cambodia UN REDD National Programme Document]

Overall Programme Outcome: Enable Cambodia to be ready for REDD+ Implementation, including development of necessary institutions, policies and capacity.

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
From R-PP Components	From R-PP Components Baselines are a measure of the indicator at the start of the joint programme	From identified data and information sources	How is it to be obtained?	Specific responsibilities of participating UN organizations (including in case of shared results)	Summary of assumptions and risks for each result
Component 1: Organise and Consult **Outcome 1: Effective National Management of the REDD+ Readiness process and stakeholder engagement in accordance with the consultation principles in the R-PP.**					
1.1 National REDD+ Readiness Coordination Mechanism established	- Baseline: interim Taskforce, no approved ToR - By 6/2011 a multi-agency Taskforce is approved - By 6/2011 a draft Taskforce TOR is agreed	Reports and minutes of monthly Taskforce meetings	Collection of minutes and reports of monthly Taskforce meetings	REDD+ Taskforce Chair	Coordination mechanism works effectively
1.2 Support to National REDD+ Readiness process	- Baseline: no Secretariat or Advisory Group - By 6/2011 a Taskforce Secretariat is formed - By 6/2011 a REDD+ Advisory Group and a REDD+ Consultation Group are formed - By 6/2013 capacity building exercises have been carried out with Taskforce, secretariat and government agencies	Reports and minutes Training reports Capacity increased	Collection of minutes and reports Capacity assessments	Taskforce Secretariat	Coordination mechanism works effectively Willingness to engage and learn
1.3 Stakeholders are engaged in the REDD+ Readiness process	Baseline: Consultation Plan prepared, 4 National Consultation Events - At least 12 consultation events per year - Minutes show that consultations follow the principles in the Roadmap - By 1/2012 a consultation program for the national REDD+ strategy has been developed	Reports and minutes of consultation events	Collection of minutes, reports, briefings.	Taskforce Secretariat	Coordination mechanism works effectively Political will in support of the REDD+ strategy
1.4 Stakeholders provided with access to information on REDD+ and the National REDD+ Readiness process	Baseline: Khmer 101-103 awareness-raising materials available, no website - By 10/2011 a REDD+ information and dissemination website had been created - By 10/2011 an awareness raising plan has been	Website active Plans published Reports and minutes	Collection of minutes and reports	Taskforce Secretariat	Willingness to engage. Access to information is possible in more remote areas

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
	developed. - By 7/2012 local communication tools have been developed - At least 12 awareness raising events by end of 2012				
Component 2: Prepare the REDD+ Strategy **Outcome 2: Development of the National REDD+ Strategy and Implementation Framework.**					
2.1 REDD+ Strategy analysis	Baseline: draft report - By 10/2011 the Assessment of Land-use, Forest Policy and Governance report has undergone consultation and is approved by the Taskforce.	Approved Report	Collection of minutes of Taskforce meeting to approve report	REDD+ Taskforce	Coordination mechanism works effectively
2.2 Development of individual REDD+ strategies	Baseline: candidate REDD+ Strategies in Roadmap; no strategies have been evaluated - By 7/2013 line agency specific REDD+ strategies have been developed and evaluated for FA, FiA and GDANCP - By end of 2012 at least four Capacity building activities being carried out for each agency	Strategy Reports adopted by the Taskforce	Collection of minutes, reports and policy statements	Line agencies	Coordination mechanism works effectively
2.3 Development of National REDD+ Strategy	Baseline: no REDD+ strategy - By 7/2013 the National REDD+ Strategy has been developed and consulted upon in accordance with the R-PP consultation principles	Publication of National REDD+ Strategy approved by the Taskforce and national stakeholders	Collection of minutes, reports and policy statements	REDD+ Taskforce	Coordination mechanism works effectively Sufficient political support for REDD+ Stakeholders are engaged in the strategy development process
2.4 Development of REDD+ Implementation Policies and laws	Baseline: two government decisions/regulations refer to REDD+; no integration of REDD+ into existing forest management strategies - By 7/2012 an analysis of national and subnational implementation is complete - By 7/2013 at least six government decisions or regulations refer to REDD+ - By 12/2013 REDD+ has been integrated into at least ten forest management strategies	Approval of Government decisions or regulations Implementation guidance for forest management strategies (e.g. CF regulations, PA management plans, etc)	Collection of minutes, reports, management plans or regulations and government decisions	REDD+ Taskforce	Coordination mechanism works effectively Sufficient political support for REDD+ Stakeholders are engaged in the strategy development process
2.5 Benefit-sharing studies	Baseline: existing pilot projects	Approved report on	Collection of minutes and	REDD+ Taskforce	Coordination mechanism works

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
	- By 10/2011 a Benefits Sharing Technical Team is formed - By end of 2012 an analysis of possible benefit sharing arrangements is complete. - By 7/2013 consultation on different sharing mechanisms is complete.	benefit-sharing by the Taskforce	reports		effectively No legal barriers to benefit sharing options
2.6 Establishing REDD+ Fund mechanisms	Baseline: no funds exist - By 7/2012 an analysis of legal mechanisms is complete - By end of 2012 at least one Fund has been established	Reports Approval of the Fund	Collection of minutes and reports	REDD+ Taskforce	No legal barriers to establishing funds
2.7 REDD+ demonstration activities	Baseline: two voluntary carbon market projects - By 7/2012 the two voluntary carbon market projects are selling REDD+ credits - By 7/2012 guidance for REDD+ projects is produced - By 7/2014 two further REDD+ projects are finalised - By 7/2014 two provinces have the necessary capacity and plans to implement REDD+ strategies	Registered verified emissions reductions; Provincial REDD+ plans and strategies; Reports	Collection of reports and documentation	REDD+ Projects Technical Team Provincial Authorities NGOs/Project Implementers	Sufficient political support for REDD+ Buyers for REDD+ credits can be found Coordination mechanism works effectively Willingness to engage
2.8 A system exists providing information on how the safeguards are being implemented and monitored	Baseline: no national REDD+ safeguards, no existing safeguard mechanisms - By 10/2011 an ESMF has been produced (or equivalent) - By 7/2012 appropriate national safeguards have been identified - By 1/2013 SESA of the candidate REDD+ strategies has been completed	Reports ESMF framework published	Collection of minutes and reports	REDD+ Taskforce Consultation and Safeguards Technical Team	Coordination mechanism works effectively Political will in support of SESA
Component 3: Develop a Reference Level **Outcome 3: Establishment of Cambodia's Reference Level for REDD+**					
3.1 Quantify activity data (land-use change assessments)	Baseline: existing forest cover assessments (2002, 2006, 2010) - By 1/2012 the accuracy and suitability of current forest cover assessments has been analysed - By 1/2013 forest cover assessments have been updated as appropriate	Reports Datasets	Collection of minutes and reports Maps Datasets	MRV/REL Technical Team	Coordination mechanism works effectively Suitable data are available
3.2 Develop historical emission and removal	Baseline: existing forest carbon stock data - By 7/2012 suitability of	Reports Datasets	Collection of minutes and reports	MRV/REL Technical Team	Coordination mechanism works effectively

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
factors for REDD+ related activities	current forest carbon stock data has been assessed - By 7/2013 historical emissions factors have been decided		Maps Datasets		Suitable data are available
3.3 Develop historical baseline	Baseline: existing data - By 1/2013 a historical baseline of forest cover is available - By 7/2013 a historical emissions baseline is produced	Reports Datasets	Collection of minutes and reports Maps Datasets	MRV/REL Technical Team	Coordination mechanism works effectively Suitable data are available
3.4 Develop future reference level for REDD+	Baseline: draft report on the Assessment of Land-use, Forest Policy and Governance - By 7/2012 'national circumstances' for the UNFCCC has been assessed - By end of 2012 modeling of future trends is complete - By 1/2014 proposed future reference level is produced	Reports Datasets	Collection of minutes and reports Maps Datasets	REDD+ Taskforce	Coordination mechanism works effectively Appropriate data is available or can be collected
3.5 Subnational RLs/RELs	Baseline: no RLs/RELs for any subnational units - By 1/2013 subnational RL/RELs are available for two provinces - By 1/2014 an agreement on how to integrate subnational RL/RELs into the national RL/REL exists	Reports Datasets	Collection of minutes and reports Maps Datasets	REDD+ Taskforce Provincial Implementers	Coordination mechanism works effectively Appropriate data is available or can be collected
Component 4: Design of a Monitoring System **Outcome 4: Monitoring system designed for REDD+ with capacity for implementation**					
4a.1 Establishment National MRV/REL Technical Team and build appropriate national capacity	Baseline: no MRV/REL Technical Team, 1 training course held on MRV/REL - By 7/2011 a MRV/REL Technical Team is established. - By 7/2011 MRV/REL advisor is in place - By end of 2012 at least six training courses on MRV/REL have been held	Reports Capacity Assessments	Collection of minutes and reports	REDD+ Taskforce	Coordination mechanism works effectively
4a.2 Collation and harmonization of existing data	Baseline: data is held in multiple Government offices - By end of 2011 all forest cover and forest stock data is collected and harmonized	Report Datasets	Collection of minutes and reports Maps	MRV/REL Technical Team	Coordination mechanism works effectively Suitable data are available
4a.3 Develop Cambodia Monitoring system plan	Baseline: principles for a Monitoring system agreed - By end of 2012 a national monitoring system is designed	Report	Collection of minutes and reports	MRV/REL Technical Team	Coordination mechanism works effectively
4a.4 Establish a	Baseline: current forest cover	Reports	Collection of	MRV/REL Technical	Coordination

Expected Results (Outcomes & outputs)	Indicators (with baselines & indicative timeframe)	Means of verification	Collection methods (with indicative time frame & frequency)	Responsibilities	Risks & assumptions
national forest cover monitoring system to quantify activity data	assessments - By end of 2012 forest cover monitoring system has been designed and staff trained in its use - Regular updates of forest cover as appropriate	Datasets	minutes and reports Maps Datasets	Team	mechanism works effectively Suitable data are available
4a.5 Design of a National Forest Inventory to develop emission and removal factors for REDD+ related activities	Baseline: principles for a Monitoring system plan in Section 6 of the Roadmap - By end of 2012 a national forest inventory system is developed - By 7/2012 a central database is created - By 7/2013 pilot field data collection has been completed	Reports Database Datasets	Collection of minutes and reports Database entry Datasets	MRV/REL Technical Team	Coordination mechanism works effectively
4a.6 Establish capacity for REDD+ reporting	Baseline: only the Department of Climate Change have capacity for GHG reporting - By end of 2012, FA, GDANCP and FiA understand current GHG reporting requirements under the UNFCCC	Reports Capacity Assessments	Collection of minutes and reports	MRV/REL Technical Team	Coordination mechanism works effectively
4.b Monitoring of Multiple Benefits, Other Impacts, and Governance	Baseline: many site projects are monitoring co-benefits - By 7/2012 indicators for co-benefit monitoring have been selected based on the REDD+ safeguards - By 7/2013 a draft monitoring plan is undergoing consultation	Indicators published Draft monitoring plan	Collection of minutes, SESA and reports	Consultation and Safeguards Technical Team	Coordination mechanism works effectively

Table 13. Risk Log: Cambodia REDD National Programme

The Risk Log was originally prepared for the Cambodia UN REDD National Programme

#	Description	Date Identified	Type	Impact & Probability	Counter measures / management response	Owner	Submitted / updated by	Last Update	Status
1	Commitment of the RGC towards implementing REDD does not remain firm	Programme formulation	Political	High-level political support for REDD is required if Government agencies are to coordinate the development of a national programme. Probability = 2; Impact = 4; Risk = 8	Achieving high-level political support for REDD+ is contingent on successful progress of the international negotiations, and establishment of mechanisms to reward developing countries and/or people in developing countries for reductions in deforestation. High-level political support for REDD+ in Cambodia is dependent on the success of the already-established pilot projects. These pilots will be supported through to completion by UNDP.	UNDP Country Office will monitor	Programme formulation team leader	September 2010	Stable
2	Government agencies do not cooperate and coordinate activities effectively	Programme formulation	Organisational	Failure of Government agencies, especially FA and GDANCP, to work together effectively would slow but would not prevent progress towards REDD+ Readiness. A perception of institutional competition would reduce overall commitment to REDD+ Probability = 3; Impact = 3; Risk = 9	The Cambodia REDD+ Taskforce has been explicitly established to mitigate this risk. The Taskforce's decision-making process ensures adequate coordination and consensus between Government agencies. It will be critical that the participating UN agencies and international advisors coordinate with both FA/MAFF and GDANCP/MoE through implementation and	Cambodia REDD+ Taskforce and UNDP will monitor	Programme formulation team leader	September 2010	Stable

#	Description	Date Identified	Type	Impact & Probability	Counter measures / management response	Owner	Submitted / updated by	Last Update	Status
					avoid perceptions of bias.				
3	Donor coordination is ineffective	Programme formulation	Organisational	Lack of donor coordination could restrict the effectiveness of achieving REDD+ Readiness. As the UN REDD programme was formulated as part of a larger partnership in developing REDD-Readiness, this could limit the benefits of the programme. Probability = 1; Impact = 2; Risk = 2	The UN REDD Programme Board (and REDD+ Advisory Group) includes representatives from the key donors, and will promote coordination.	UN agencies in country; UN agency regional coordinators /advisors	Programme formulation team leader	September 2010	Stable
4	Subnational authorities do not share central government's commitment to REDD	Programme formulation	Political	It is inevitable that there will be variation in the level of commitment among sub-national partners; where commitment is low, developing capacity to implement REDD will be slow. Ultimately, it is to be expected that national implementation of REDD will take account of poor progress in some provinces/districts Probability = 2; Impact = 2; Risk = 4.	Formulation of the programme took this risk into account by prioritizing existing pilot demonstration projects for support over new programmes, and by selecting a pilot province (Mondulkiri) with existing pilot project activities and a strong commitment to conservation.	Programme Coordinator and Technical Advisor will be responsible for reporting to UNDP CO on any early indications of lock of commitment at pilot sites	Programme formulation team leader	September 2010	Stable
5	Programme inputs (funds, human	Programme formulation	Operational	Most of the outputs in the programme logframe are	Rapid recruitment of the programme coordinator and	Programme coordinator	Programme formulation	September 2010	Stable

#	Description	Date Identified	Type	Impact & Probability	Counter measures / management response	Owner	Submitted / updated by	Last Update	Status
	resources, etc.) are not mobilized in a timely fashion			inter-connected so slow mobilization of inputs to one component will slow down the whole programme. Probability = 2; Impact = 2; Risk = 4	technical advisor should reduce the probability and impact of this risk	will be responsible for reporting to UN agencies on apparent or potential delays in mobilizing inputs	team leader		
6	Influential stakeholders who could profit from REDD+ take over the national REDD+ Readiness process	Programme formulation	Political	It is recognized that some stakeholders could profit significantly from REDD+ and could be tempted to take over the national REDD+ Readiness process. This would compromise the program. Probability = 1; Impact = 3; Risk = 6.	Empowering the Cambodia REDD+ Taskforce and quickly demonstrating progress should reduce the risk of other influential stakeholders hijacking the process.	FA and Programme Coordinator will be responsible for monitoring	Programme formulation team leader	September 2010	Stable
7	UN agency partners are unable to coordinate inputs and support to the programme	Programme formulation	Strategic	The three UN Agency partners in UN-REDD have limited experience in working on joint programmes, and have different approaches to project management, which could impact efficiency of programme implementation Probability = 3; Impact = 2; Risk = 6	The UNRC office will, facilitate and coordinate. Regular communication at all levels among the UN agencies will reduce risk	UNRC, UN Agency country offices and regional coordinators	Programme formulation team leader	September 2010	Stable

* Probability (P) x Impact (I) = risk; P and I are ranked from 1 to 5 (1 = low; 5 = high); low risk is 1, high risk is 25

Suggested Annexes for the R-PP (Optional)

Annex 1a: National Readiness Management Arrangements

Draft Terms of Reference

Cambodia REDD+ Taskforce

1. Objectives

The Cambodia REDD+ Taskforce is responsible for:

- Overall management of the REDD+ Readiness process
- Developing the National REDD+ strategy and Implementation Framework, including recommendations for legal and institution changes
- Establishing standards and guidelines for REDD+ demonstration activities (projects)
- Other key REDD+ Readiness activities

2. Membership

Membership of the taskforce is based on relevance of mandates, jurisdictions, responsibilities and activities in areas relevant to REDD readiness as reflected in sections of the REDD+ roadmap (see list above).

The number of representatives from each agency still needs to be agreed.

The REDD+ Advisory group will be invited to attend all Taskforce meetings as observers and may be called on to comment on specific issues. Consultation Group members may also be invited to attend.

3. Decision-making

The FA serves as the chair and GDANCP serves as the deputy chair of the REDD+ Taskforce. All decisions are made on a consensus basis of FA, GDANCP and FiA, as the agencies responsible for forest land management. All reports of the Taskforce that require signature by the chair will also be initialled by the deputy chair. Both the Chair and the Deputy Chair should nominate their alternates to be present if they are absent. If the Chair is absent the Deputy Chair should fill their function.

4. Responsibilities

- Overall management of the National REDD+ Readiness process
- Compiling and approving National REDD+ Readiness workplans and budgets produced by line agencies
- Developing the National REDD+ strategy and Implementation Framework
- Establish Technical Teams, reporting to the Taskforce, to review key technical issues as set out in the REDD+ Roadmap
- Establishing standards and guidelines for REDD+ demonstration activities (projects)
- Review and approve proposed consultants and advisors proposed to work with the REDD+ Taskforce on REDD+ Readiness by development partners
- Approve and supervise all consultancy inputs
- Oversight of Stakeholder Consultation and awareness-raising
- Seeking financial support on REDD+ Readiness process
- Regular meetings with REDD+ Advisory Group
- Information collection and institutional mapping about ongoing REDD activities
- Participation in trainings, meetings on REDD
- Coordination, including liaison with development partners and activities by NGOs

- Reporting by line agency members to their respective line agency

5. Reporting

REDD+ Taskforce members are responsible for reporting to and consulting with their respective line agencies. Members can request additional time on specific issues if they feel it is of high importance to their line agency and further discussion is needed.

The Taskforce sends reports to National Climate Change Committee, as the main coordination mechanism on climate change. NCCC adopts reports to the UNFCCC, as per Sub-decree No. 99 dated 18 August 2010. MoE is responsible for sending national reports to the UNFCCC.

For the FA, sectoral coordination will happen through the TWGF&E and for FiA sectoral coordination will happen through the TWGFiA. For GDANCP, sectoral coordination will happen through the proposed new TWG on environment and climate change. Other TWGs may be informed as appropriate.

Minutes of Taskforce meetings will be taken, summarising the members present and the key conclusions reached. These minutes will be made available to relevant Government agencies and development partners.

6. Duration and timing

The Cambodia REDD+ Technical Taskforce will meet monthly, or more frequently if required.

It is expected that members will be required to work between 5 and 10 days per month, depending on activities.

Timings of the meetings will be announced sufficiently in advance and relevant documents must be provided to all members including the Advisory Group and Consultation Group within a reasonable time period.

<u>Taskforce Secretariat</u>

1. Objectives

The Taskforce Secretariat serves the Taskforce and is responsible for day-to-day management of the REDD+ Readiness process.

2. Membership

The Taskforce Secretariat would have the following membership:

- FA serves as Chair of the secretariat
- GDANCP serves as Vice chair of the secretariat and lead representative of GDANCP
- FA representatives
- GDANCP representatives
- FiA representatives
- Other line agency representatives as appropriate
- Non-Government Coordinator
- Support staff
- International Advisors

3. Decision-making

FA, GDANCP and FiA lead representatives are responsible for decision-making on activities under the management of their line agency. Other decisions are made by consensus of FA, GDANCP and FiA.

4. Responsibilities

The Taskforce Secretariat is responsible for:

- Day to day communication, administration and accounting
- Producing draft workplans and budgets for National REDD+ Readiness activities for submission to the Taskforce for consideration and approval
- Consolidating workplans and budgets produced by individual line agencies, Taskforce Technical Teams, and other units undertaking REDD+ Readiness activities

- Supervising activities of the Taskforce Technical Teams
- Day-to-day management of the National REDD+ Readiness process
- Producing quarterly reports and financial statements on the National REDD+ Readiness process
- Facilitating communication and coordination between Taskforce, the REDD+ Advisory Group and the Stakeholder Group

5. Reporting

The Taskforce Secretariat reports to the Cambodia REDD+ Taskforce

6. Duration and timing

Taskforce Secretariat members would work full-time.

7. Location

Taskforce Secretariat would be housed in the FA and GDANCP, but representatives would meet regularly to ensure appropriate coordination.

Terms of Reference for the REDD+ Advisory Group and Consultation Group to be finalised

Annex 1b: Information Sharing and Early Dialogue with Key Stakeholder Groups

Stakeholders

The below analysis provides an initial assessment of key stakeholders within the sector that should be engaged during the REDD+ Readiness phase and the coordination mechanisms that currently exist. By identifying the coordination mechanism that exist it is intended that consultation process around REDD+ will be able to work with existing structures to prevent duplication and to help build the trust and capacity of different actors within the sector. The key stakeholder groups described are:

- Government Institutions and Agencies;
- Civil Society and NGOs;
- Private Sector;
- Knowledge Institutions;
- Development Partners; and
- International Networks.

A brief analysis of these groups is provided below and in Table 1.

Table 1: Key Stakeholder Groups and existing coordination mechanisms

Group	Key members and Coordination mechanisms
Government	MAFF, MoE, MoI, MEF, MLMUPC, MRD, MIME, MOWRAM, etc. National coordination bodies: National Climate Change Committee, Council for Land Policy; Cadastral Commission; National Committee for Land Management; National Committee for Addressing Disputes in Relation to Creation of Permanent Forest Reserve Areas; Forest Land Encroachment Committee; National Authority for Land Disputes/Conflict Resolution; National Committee for Subnational Democratic Development (NCDD); Expropriation Committee Technical Coordination of REDD+ Readiness plans: interim REDD+ Taskforce (since January 2010)
Government-donor coordination bodies	Technical Working Groups: mixed membership, including Government agencies, donors, private sector and NGOs

Donors	Japan, Danida, EU, UNDP, FAO, World Bank, USAID
Private Sector	International investors (e.g. Terra Global Capital, Macquarie Capital, Merrill Lynch), Cambodia Timber Industry Association, Nexus, Banks based in Cambodia
Environmental and Conservation NGO's working on REDD+	Informal REDD+ Working Group: Center for Clean Air Policy (CCAP), BirdLife International in Indochina, Conservation International, East-West Management Institute Cambodia, French Office of National Forests International (ONFi), Groupe Energies Renouvelables, Environnement et Solidarités (GERES), Maddox-Jolie-Pitt Project, PACT, Regional Community Forestry Training Center (RECOFTC) – Center for People and Forests, Wildlife Alliance, Wildlife Conservation Society (WCS), World Wildlife Fund (WWF) Coordination Group: Informal NGO REDD+ Working Group
Climate Change NGO's	>60 members of the National Climate Change Network
Community Forestry groups	>60 members of the National Community Forestry Program Coordination Committee NGO Forum Forestry Network Regional/Provincial/Local networks in areas with REDD projects, such as Oddar Meanchey Community Forestry network
Indigenous peoples and civil society organisations:	Representative organisations such as CPN, ICSO, IRAM and CIYA Meetings facilitated by NGO Forum Regional/provincial/local networks in areas with REDD projects (e.g. Prey Long)
Academic Institutions	CDRI, CAS, RUPP, Royal University of Agriculture, Prek Leap National School of Agriculture

1. Government agencies

The Government agencies are responsible for policy, regulatory and planning tasks related to establishment and maintenance of the enabling conditions for REDD+ Readiness implementation. This includes enforcement of legislation and regulations, conflict resolution, service delivery, and ensuring that necessary human capacity and technical assistance are available for development. Key Government agencies are described in Section 5 above. A key consideration is the majority of forests are state property, although mechanisms exist for local co-management of forestlands through Community Forestry, Community Protected Area, Protected Area Zonation and Community Fisheries arrangements. A mechanism for REDD+ could provide substantial support to existing and future plans for forest governance in Cambodia. The existing NFP identifies it as a potential funding resource for long term NFP implementation and the levels of funding associated with REDD+ may be the only opportunity to effectively scale up activities such as community forestry to the levels identified in the NFP. Provision of this level of funding is critical if Cambodia's forests are to be secured for the long-term.

Coordination through and across Government will be critical to the success of REDD+. The capacity of several institutions will also have to be increased if strategies for REDD+ are to be effectively implemented. The interim REDD+ Taskforce was formed in January 2010 to lead the REDD+ Readiness planning process in order to ensure balanced discussion and coordination between Government agencies in development of the Readiness Plan Proposal. The establishment of the Taskforce was necessary because it was felt that no existing national-level body existed at the technical level with a mandate to develop REDD+ Readiness plans. Continuation of this coordination mechanism through the REDD+ Readiness process will be very important.

Government Coordination

Government coordination occurs at a number of levels both within Government and between Government and other stakeholders. Key coordination mechanisms include:

- The Government-Donor Coordination Committee

A high level Government-Donor Coordination Committee (GDCC) has been established to coordinate the TWGs and to provide policy guidance, set priorities and resolve problems/issues raised by the TWGs.

- Technical Working Groups

There are 18 technical working groups to coordinate activities between donors, Government and prominent actors in NGOs and civil society and the private sector. The Technical Working Group on Forest and the Environment will be the most directly relevant but TWG's in Agriculture and Water, Fisheries, and Land as well as Legal and Judicial Reform, Public Financial Management, Private Sector Development, National Strategic Development Planning, and Decentralisation and Deconcentration may also be relevant.

- National Climate Change Committee and other national-level committees

The RGC established the National Climate Change Committee (NCCC) in 2006. The NCCC comprises senior policy-makers from 20 ministries and serves as a policy-making body that coordinates the development and implementation of policies, plans, and measures to address climate change issues within Cambodia. The Prime Minister accepted the position of the Honorary Chair of the NCCC by Sub-decree #174 dated 14 October 2009. Other relevant national-level committees are described in Component 1a above.

2. NGOs and Civil Society

Cambodia has a vibrant and highly professional NGO sector[72] capable of providing considerable assistance to REDD+ development. There are approximately 450 active local NGOs registered with the Ministry of Interior, and 316 active international NGOs registered with the Ministry of Foreign Affairs[73]. The majority of these organisations however owe their existence more to the influence and financial support of international donors than a natural scaling up of grassroots organizations[74]. This upward accountability has resulted in most CSO/NGO organizations possessing 'undemocratic structures,' mobilising 'low levels of public participation,' and lacking a 'clearly defined constituency.'[75] These challenges are also combined with limited engagement of women within the sector and a political history and climate that has limited the establishment of NGOs as explicitly political actors, able to lead public opinion or influence public policy[75].

This situation presents challenge to identifying organizations capable of linking community perceptions to national policy processes. Strategies for civil society engagement must thus balance the provision of technical support to the process by organizations, with a more grassroots based approach to awareness raising and consultation. This latter element will need to be carefully programmed to prevent the small number of organizations that have the capacity to act as representatives becoming overburdened.

<u>Non-Governmental Organisations</u>

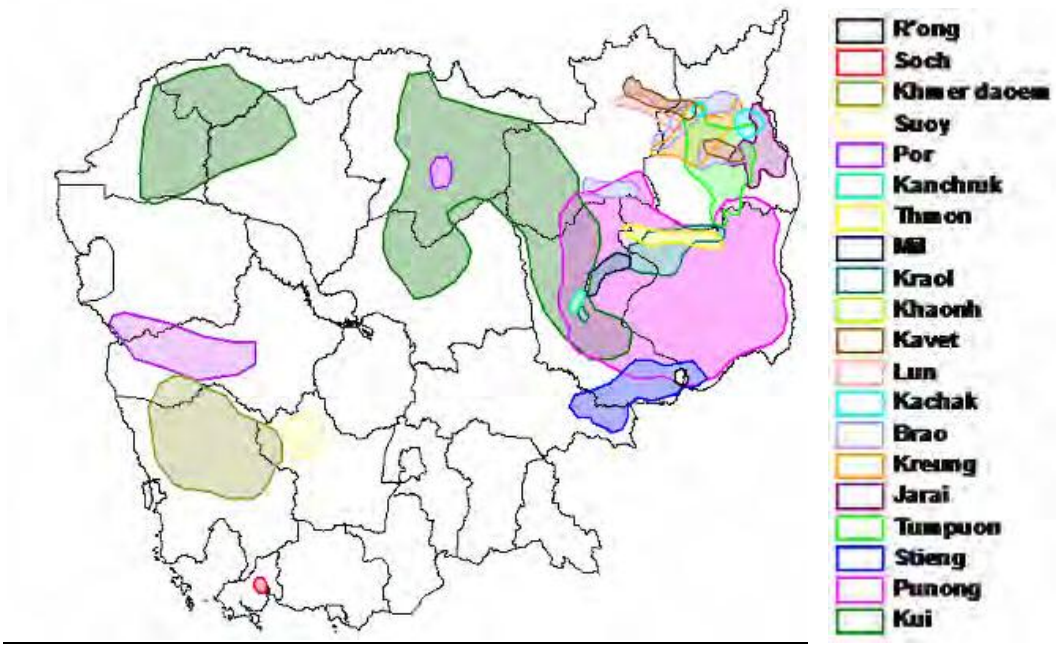
The NGO sector in Cambodia is extensive, often has high capacity, and has already established mechanisms for coordination on forestry, community forestry, REDD+ and climate change. Both National and International NGO's have the capacity to provide technical support to Government agencies in implementation of REDD+ Readiness activities, such as awareness-raising, and REDD+ strategies. There are already several organisations with experience of REDD+ processes internationally as well as the implementation of pilot REDD+ projects within Cambodia, as well as organisations with considerable experience in community forestry, indigenous rights and land. The knowledge and skills of these organisations will be important to the development of National REDD+ strategies.

<u>Indigenous Peoples</u>

[72] Hughes and Un (2007) Cambodia Country Governance Assessment. Governance and Social Development Resource Centre
[73] Chanboreth, E. and Hach, S., (December 2008), Aid Effectiveness in Cambodia, Wolfensohn Working Paper No.7. The Brookings Institution, Washington, D.C.
[74] Malena C and Chimm K (2009) Linking Citizens and the State: An Assessment of Civil Society Contributions to Good Governance in Cambodia. World Bank
[75] Hughes and Un (2007) Cambodia Country Governance Assessment. Governance and Social Development Resource Centre

There are 20 recognized indigenous groups in Cambodia[76] making up approximately 1.3% of the population. These groups are distributed across 15 provinces where their traditional territories are closely related to areas of highest carbon density within Cambodia (Figure 1 and Leng et al. 2010[77]) making their engagement in the development of any REDD+ process critical.

Figure 1. Distribution of Ethnic Groups in Cambodia[78]



Most indigenous groups maintain organized systems of governance at the village level. Representation at national level however experiences many of the challenges experienced by the wider civil society and NGO community.

Key NGO, Civil Society and Indigenous Organisations, Groups and Networks Relevant to REDD+

A wide number of networks and organizations exist that will be relevant to the technical development and management of mechanisms for REDD+. For the purpose of developing and overview of stakeholder networks and organizations this section covers the main existing networks at national level that can be relevant to REDD+:

- National Climate Change Network

The national climate change network has a membership of over 40 NGO's who participate in a wide range of activities relating to climate change. The network is chaired by Oxfam America and has an organizing committee including a number of national and international NGO's.

- National Community Forestry Program Coordination Committee

The National Community Forestry Program Coordination Committee includes Government members, and representatives from NGOs and community forestry groups.

- Informal REDD+ Working Group

[76] IPNN (2010) The Rights of Indigenous Peoples in Cambodia. 76th Submission to the UN Committee for the Elimination of Racial Discrimination
[77] Leng, C., Ravilious, C., Kapos, V., Bertzky, M., Osti, M., Clements, T., Dickson, B. (2010) Carbon, biodiversity and ecosystem services: Exploring co-benefits. Cambodia. UNEP-WCMC, Cambridge, UK.
[78] IPNN (2010) The Rights of Indigenous Peoples in Cambodia. 76th Submission to the UN Committee for the Elimination of Racial Discrimination

A large number of international and national environmental NGOs have projects and programs in Cambodia, and the majority of these have site-based forest conservation projects, which often include a REDD+ component. Many of the NGOs are part of the Informal NGO REDD Working Group, which meets weekly in Phnom Penh. The members of the Informal NGO REDD Working Group include:

Table 2. NGO members of the Informal REDD+ Working Group

NGO	REDD+ relevant activities
BirdLife International *in Indochina*	Forest and species conservation projects
Conservation International	Site-based forest conservation programs in the Cardamom mountains and REDD+ feasibility assessment in Prey Long
East-West Management Institute Cambodia	Program on Rights and Justice focuses on human rights advocacy, rule of law promotion and biodiversity protection, including strengthening grassroots advocacy and community networks, such as community–based advocacy to protect Cambodia's biodiversity.
French Office of National Forests *International* (ONFi)	REDD+ feasibility assessment for Wildlife Alliance
Groupe Energies Renouvelables, Environnement et Solidarités (GERES)	Reductions in biomass use through improved fuelwood cookstoves and other projects, generating carbon credits to be sold through the CDM and voluntary carbon markets. Established Nexus as a non-profit alliance of pro-poor carbon project developers that provides assistance for projects to enter the carbon market.
PACT	Oddar Meanchey REDD+ Pilot Project with local community forests
Regional Community Forestry Training Center (RECOFTC) – Center for People and Forests	Community Forestry Capacity-building and training
Wildlife Alliance	Forest conservation in south-west Cambodia REDD+ feasibility project undertaken by ONFi
Wildlife Conservation Society (WCS)	Seima Forest Project: REDD+ Pilot Project for protection forests Northern Plains conservation program, including REDD+ feasibility assessments for sites in Preah Vihear Support to National REDD+ Readiness
World Wildlife Fund (WWF)	Forest and species conservation in Mondulkiri province, eastern Cambodia

The only NGOs with an interest in REDD+ projects not currently members of the Informal NGO REDD Working Group are:

- Maddox-Jolie Pitt Project: implementing site-based forest conservation in Samlout Protected Area, including an interest in REDD+.
- Clinton Climate Initiative: supporting REDD+ projects in Northeast Cambodia, and a member of the interim REDD+ Taskforce.

- Forest Livelihoods and Plantation Network (FLPN):

This network is organized by NGO Forum. It has a membership of 30 groups based at national and local levels. The network meets every three months.

- Land Action Network for Development (LAND)

The Land Action Network for Development is organised by NGO Forum. It has a membership 30 groups based at the national-level and 10 NGOs at provincial levels. Currently, the LAND is on the process of reviewing its network members to expand to country wide. National Level meets every two month and provincial level groups meet every month.

- Indigenous Peoples NGOs Network (IPNN):

IPNN is organized by NGO Forum. It has a membership of 24 NGOs and civil society groups based at national and local levels. The network meets every three month (quarterly basis).

- Environment Network:

The Environment Network is organized by NGO Forum and comprises of 22 NGOs at national and provincial levels. The network meets every 2 months.

Considerable cross over exists between the membership of these different groups.

Box 1: NGO Forum, a National Networking NGO
The NGO-Fourm is a membership organisation for local and international Non-Governmental Organisations (NGOs) working in Cambodia. It exists for information sharing, debate and advocacy on priority issues affecting Cambodia's development. The organizations Core Programme brings together member NGOs in member meetings, and covers the NGO Forum's core representational role. Through this core function the forum runs a eleven networks including the National Forestry Network, the Indigenous People's National network and the Land Action Network for Development.

Grassroots civil society and indigenous peoples networks

Cambodian indigenous peoples are usually organized in local community groups. National organizations include Cambodia Indigenous Youth Association (CIYA), Indigenous Community Support Organization (ICSO) and Indigenous Rights Active Members (IRAM). National-level civil society networks include the Community Peace Network (CPN).

Regional, provincial and local networks of NGOs and community-based organizations organized around particular issues, such as the Oddar Meanchey Community Forestry network (a network of community forestry groups in Oddar Meanchey province, many of whom are involved in the local REDD+ project).

3. The Private Sector

Cambodia's private sector is developing rapidly with extensive international investment as well as a growing number of Cambodian firms. The country has already made some progress in attracting international capital for forest carbon from TerraGlobalCapital, a US-based company who has partnered for the Oddar Meanchey pilot project. Several other private sector companies have expressed interest in investing in forest carbon pilot projects in Cambodia. Nexus, a global alliance of social ventures (nonprofits, nongovernmental organizations and eco-businesses) whose central mission is to reduce climate change while alleviating poverty, has a large number of core staff based in Cambodia although the organization is incorporated as a nonprofit in Singapore. Nexus provides a bridge for NGOs, community groups and social enterprise to access the carbon market finance for projects that deliver climate change benefits. Nexus' services include awareness raising, carbon auditing, capacity building, carbon project development, and carbon asset management. The Cambodia Timber Industry Association represents the remaining forestry concession companies in Cambodia, some of whom have expressed interest in REDD+.

Other private sector activities that are relevant to REDD+ at present are agro-industrial development, and mineral extraction. For REDD+ to be successful the correct conditions will be required to encourage investment to move from forest clearance for development towards activities that support the maintenance of the existing forests. To achieve this the correct enabling environment will be critical the development of which will require consultation with both private sector actors and those in other sectors.

4. Academic Institutions

Cambodia has several established policy research institutions, such as Cambodia Development Resource Institute (CDRI) and the Center for Advanced Study (CAS). Major Universities include the Royal University of Phnom Penh, which already has well-regarded master's courses on environmental conservation and provides teaching on Payments for Ecosystem Services, the Royal University of Agriculture (Chamkar Dong) and Prek Leap National School of Agriculture, all in Phnom Penh. Universities could play a key role in implementation of REDD+ through courses on REDD+ and necessary skills such as forest inventories.

5. Development Partners

Development partners have provided vital support to the development of Cambodia's forest, environment, land and climate change sectors. Several partners have already committed to provide further support to policy dialogue and REDD+ Readiness implementation. Development partner experience will play an

important role in linking national and international process. It is important that communication between development partners and Government is also clearly maintained to ensure that efforts towards REDD+ are coordinated with other initiatives.

Development Partner coordination mechanisms include:

- The Technical Working Groups. The Technical Working Group development partner meetings provide a forum for coordination between development partners, who also join full TWG meetings.
- Cambodia Climate Change Alliance. The Cambodia Climate Change Alliance (CCCA) is a multi-donor initiative (funded by Sida, DANIDA, EC and UNDP) that supports NCCC.

6. International Networks

Cambodia is a member of a number of different global and regional organizations, which provides an important resource to learn lessons from other countries about the development of REDD+ process as well as providing opportunities for further capacity building and regional coordination. Cambodia is a member of the Interim REDD+ Partnership, a global partnership of developed countries and developing forest countries established after the UNFCCC Copenhagen Climate Change conference to support and contribute to the international REDD+ policy development process. The partnership aims to promote transparency around financing and existing and new international initiatives to achieve REDD+. Cambodia is also a member of the Coalition of Rainforest Nations (a negotiating bloc of tropical forest countries within the UNFCCC), the Forest Carbon Partnership Facility and UN REDD. Regional networks include the ASEAN Regional Knowledge Network on Forests and Climate Change, which was initiated in 2008 following a desire by country governments to increase their levels of understanding and knowledge of REDD+, and the Asian Senior Officials on Forestry (ASOF) meetings. The Asia Indigenous Peoples Pact (AIPP) serves as a forum for sharing aspirations, ideas and experiences, consolidating cooperation and solidarity and coordination and organizing campaigns on issues affecting indigenous peoples in Asia.

Annex 1c: Consultation and Participation Process

Annex 2a: Assessment of Land Use, Forest Law, Policy and Governance

Key Policies, Laws and Regulations Relevant to REDD+ in Cambodia

National Policies

In 2002, Cambodia's forest sector entered a prolonged period of reform following the suspension of all logging concessions by the Royal Government of Cambodia (RGC). Over the past two years, the Royal Government of Cambodia (RGC) has begun to implement a new vision for Cambodia's forest sector, based on the Rectangular Strategy – Phase II, the National Strategic Development Plan (NSDP; Update 2009-2013), the National Forest Programme (NFP) and several new laws and policies.

Rectangular Strategy. The "Rectangular Strategy for Growth, Employment, Equity and Efficiency – Phase II" is the RCGs over-arching socioeconomic development policy agenda for the Fourth Legislature of the National Assembly (2008-2013). The Rectangular Strategy is built on four fundamentals, including "Ensuring environmental sustainability, especially through sustainable management and use of natural resources", and describes four growth areas that are prioritized by the RGC, including the "Enhancement of the Agriculture Sector" which covers "(1) improving agricultural and diversification; (2) land reform and

clearing of mines; (3) fisheries reform; and (4) forestry reform"[79]. Priority activities for the RGC in its fourth legislature include: accelerating land reform; public financial management reform; further implementation of the Decentralization and Deconcentration (D&D) policy to transfer power from the national to sub-national administrations; fisheries reform, including strengthening national resource conservation and taking serious action against illegal encroachment of flooded forests in order to secure fisheries resources; and forestry reform, including law enforcement, effective management of Protected Areas, climate change actions and Community Forestry. All development partners, including bilateral and multilateral development partners, private sector, non-governmental organizations, as well as management and officials of ministries and institutions are requested to assist the RGC in implementing the policies and programs outlined in the Rectangular Strategy – Phase II.

National Strategic Development Plan. The NSDP is intended to serve as the implementation tool or roadmap for implementation of the Rectangular Strategy – Phase II. The NSDP 2006-2010 has therefore been updated to the period 2009-2013 in order to cover the period of the Fourth Legislature and the Rectangular Strategy[80]. The Updated NSDP sets a national target of 60% forest cover, 450 approved community forests (noting that there are currently only 420 community forests at various stages of development), and reducing fuelwood dependence by 2013. It also mentions the importance of the new National Forest Programme as the strategic framework for the forestry sector, and the role of protection forests, protected areas (PAs), community forests and improved management of forestry concessions towards achieving the national target of 60% forest cover. Finally, the NSDP recognizes the importance of mobilizing resources, support, and financing to participate in global efforts to address the challenge of climate change, including REDD and greenhouse gas mitigation projects.

Cambodia Millennium Development Goals. Goal 7 "Ensure Environmental Sustainability" of the Cambodia Millennium Development Goals (CMDGs) sets out nine indicators for the forestry and environment sector under Target 13 "Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources". These indicators and targets by 2015 include:

Indicator 7.1: Forest coverage as a % of total area, Baseline: 60%, Target: 60%
Indicator 7.2: Surface of protected areas, Baseline: 3.3 million hectares, Target: 3.3 million hectares
Indicator 7.3: Surface of forest protected areas, Baseline: 1.35 million hectares, Target: 1.35 million hectares
Indicator 7.7: Number of community-based fisheries, Baseline: 264, Target: 589
Indicator 7.8: Surface of fish sanctuary, Baseline: 264,000 hectares, Target: 581,000 hectares
Indicator 7.9: Fuel wood dependency, Baseline: 92%, Target: 52%

Regional/Local Administration Governance (Decentralization & Deconcentration) Policies

Cambodia is committed to the well-organized and consistent transfer of political, fiscal, administrative and service delivery powers to sub-national authorities, a process which is commonly called decentralization and deconcentration (D&D). The Law on the Administration and Management of the Commune/Sangkat (2001), and the Law on Administrative Management of the Capital, Provinces, Municipalities, Districts and (what are referred to in the Constitution and commonly known as the "Organic Laws"), set out the roles and responsibilities of these authorities and their organizational/governance arrangements. Of these authorities, only provinces, districts and communes are relevant for REDD+ implementation, because these regional and local governance authorities are located by definition in rural areas in that contain forestland resources.

A Royal Decree enacted in 2008 established the National Committee for Sub-National Democratic Development (NCDD) to coordinate and lead the implementation of the Organic Laws, including reviewing functions and responsibilities of various line ministries/institutions, departments, units and other government authorities at all levels in order to identify the service delivery functions, responsibilities,

[79] Royal Government of Cambodia, 2008. Rectangular Strategy - for Growth, Employment, Equity and Efficiency Phase II. Presented at the First Cabinet Meeting of the Fourth Legislature of the National Assembly at the Office of the Council of Ministers Phnom Penh, 26 September 2008.
[80] Royal Government of Cambodia, 2009. National Strategic Development Plan Update 2009-2013 - For Growth, Employment, Equity and Efficiency to reach the Cambodia Millennium Development Goals.

powers and accountability that should be transferred to sub-national levels of government. The NCDD has drafted a 10-year policy framework, covering the period from 2010-2019, called the National Program for Sub-National Democratic Development (NP-SNDD), and is currently finalizing details of the first 3-year (2011-2013) implementation plan of the NP-SNDD.

Under the Organic Laws, regional and local administrative authorities currently have no direct decision making authority over the use and management of most forestland resources in the country, which instead resides primarily within MAFF, MoE and Ministry of Economy and Finance (MEF), but they do have supporting functions. Communes are mandated to protect and preserve environmental and natural resources under existing legislation , and are responsible for developing 5-year Commune Development Plans (CDP), rolling 3-year Commune Investment Programs (CIP) and Commune Land-use Plans (CLUP). The CIPs are basically the annually updated planning procedure for implementing CDPs that consist of clear development projects and budgets that are linked to district, line Ministry, donor and NGO priorities through the use of district integration workshops.

Financial resources that support both the general administrative and local development expenditures of Commune Councils are allocated through the Commune/Sangkat (C/S) Fund. The C/S Fund is the RGCs mechanism for providing discretionary funds from the National Budget through MEF directly to the lowest level of government, and is the only such nation-wide mechanism that exists. However, the Commune/Sangkat Fund is not particularly appropriate for REDD+ because funds cannot be earmarked for particular uses and payments cannot be made conditionally. Other sources of funds are available to communes for budgetary support purposes, including funds generated locally by communes through the levying of fees for service delivery functions or the imposition of local taxes as permitted by law. It should be noted that any delegation of authority or responsibility by a line Ministry to local levels of government, whether temporary or permanent in nature, should also be accompanied with the necessary resources (both financial and human resources) to properly carry out the authority or responsibilities delegated.

Sectoral Policies and Implementing Legislation

The key RGC REDD+ relevant sectoral policies for operationalising the NSDP, achieving the CMDGs and for management of forested lands in Cambodia are the National Forest Programme (NFP, 2010) for the forestry sector, particularly the Permanent Forest Reserve, the planned National Protected Areas Strategic Management Plan for the 3.1 million hectares of Protected Areas (mandated by the 2008 Protected Areas Law but yet to be developed), and the Strategic Planning Framework for Fisheries (2010). Other relevant policies include the Declaration on Land Policy (2009), the planned Cambodia Climate Change Strategy and Action Plan (CCCSAP). Relevant sectoral policies and implementing legislation are explained in more detail below.

1. National Forest Programme[81]

In 2008 and 2009, the Forestry Administration (FA), together with other stakeholders in the forest sector developed the National Forest Programme (NFP) as a strategic framework, designed to guide the implementation of the policy reforms mandated by the Rectangular Strategy and the NSDP. The forest policy reforms prioritized under the NFP build on the new legal framework for forests that has been established based on the 2002 Forestry Law, Community Forestry under the 2003 Subdecree #79 and 2005 *prakas* (Ministerial regulation), various Subdecrees creating Protected Forests, Subdecree #53 on classification and registration of the Permanent Forest Estate, and reform of forest concessions. The NFP was formally approved by MAFF in early 2010 and is being promoted by government and development partners alike as a key guiding document for the sector. It identifies nine strategic priorities, including contribution to the economy, climate change and REDD, forest governance, conservation of forest resources, improved forest management, and sustainable financing. The NFP prioritises six programmatic areas that will receive emphasis over the next two decades in order to achieve these objectives, namely (see Table 1A):

1. Forest Demarcation, Classification and Registration (Programme 1). Forest land is demarcated, classified and registered by MAFF and then entered on to the land register by the Ministry of Land Management, Urban Planning and Construction (MLMUPC). The NFP sets a target of maintaining

[81] Cambodia's National Forest Programme, 2010. Forestry Administration, Phnom Penh. www.twgfe.org/nfp/

60% forest cover by 2015, based on the CMDGs, with 120,000km of forest boundaries demarcated by 2029.

2. Forest Conservation and Development of Forest Resource and Biodiversity (Programme 2). The NFP sets targets of 3 million hectares of Protection Forests, 0.5 million hectares of plantations, and 2.4 million hectares managed according to sustainable forest management guidelines, 50% of processed wood for export being certified, and establishment of a chain of custody system.
3. Forest Law Enforcement and Governance Programme (Programme 3), including law enforcement and forest crime monitoring and reporting.
4. Community Forestry (Programme 4). The NFP sees local management as a key component of efforts to reduce deforestation and forest degradation and sets a national target of 1,000 community forestry groups registered, covering 2.0 million hectares. The Rectangular Strategy prioritizes community forestry as the principal vehicle for obtaining payments for carbon, through voluntary carbon markets and REDD. The NFP also identifies the importance of broadening strategies for decentralized forest management beyond community forestry (under the 2003 Subdecree #79, at village scale in production forest only), to include community conservation forestry (in protection forests), and partnership forestry or community production forestry (at larger scales). In common with other reviews[41] the NFP recognizes that the short 15-year length of Community Forestry Agreements, lack of local benefits, complexity of community forestry regulations, and uncertainty over royalty rates, hinder implementation of community forestry from a local perspective.
5. Capacity and Research Development (Programme 5), including development of the managerial and technical capacity of FA staff and other stakeholders. Also includes activities on research and awareness-raising activities on sustainable forest management.
6. Sustainable Forest Financing (Programme 6). The NFP identifies REDD as a critical source of sustainable financing for implementation, and prioritises development of national capacity to manage the proposed international REDD+ mechanism, including setting baselines and improving capacity for forest carbon monitoring.

The National Forest Programme provides a transparent, participatory process for planning, implementation and evaluation of all forestry activities, including direction for the overall course and approach of the wider forest sector by aligning activities with both national and international priorities and harmonising with other sectors of the national economy. Cambodia's NFP will be implemented through five-year rolling plans for each sub-programme[82].

[82] Note: Internationally, the National Forest Programme (NFP) represents a series of holistic socio-political processes that coordinate the policies, planning and field operations in the forest sector. Its development in Cambodia is still at an early stage, and it currently applies only to the mandate of the Forestry Administration of MAFF.

Table 1A. The National Forestry Programme

B: Our Challenges	C.1 Strategic objectives	D. Strategic Direction for Sustainable Forest Management	E.3 Operational Framework
B.1 Forest contribution to poverty alleviation, livelihoods and to the economy B.2 Climate change will affect forest based livelihoods B.3 Sectoral land-use planning (including coorperation between Ministries) B.4 Illegal activities and weak collaboration B.5 Forest conflicts B.6 Low capacity and insufficient knowledge B.7 Forest degradation B.8 Suitability of management models B.9 Financing	**Objective 1:** Maximise sustainable forest contribution to poverty alleviation, enhanced livelihoods and equitable economic growth **Objective 2:** Adapt to climate change and mitigate its effects on forest based livelihoods **Objective 3:** Macro land-use planning that allows for holistic planning across sectors, jurisdictions and local government borders **Objective 4:** Forest governance, law and enforcement at all levels **Objective 5:** Develop a conflict management system **Objective 6:** Raise awareness, capacity of institutions and quality of education to enable sustainable implementation of the National Forest Programme **Objective 7:** Ensure environmental protection and conservation of forest resources	**D.1 Strategic direction for objective 1:** Improved livelihoods, employment and economy **D.2 Strategic direction for objective 2:** Addressing climate change (inc REDD) **D.3 Strategic direction for objective 3:** Cross-sectoral landscape planning **D.4 Strategic direction for objective 4:** Forest governance **D.5 Strategic direction for objective 5:** Conflict management **D.6 Strategic direction for objective 6:** Capacity development **D.7 Strategic direction for objective 7:** Environmental protection and conservation of forest resources	**1. Forest Demarcation, Classification and Registration** • Sub-programme 1.1 – Forest Demarcation, forest classification and Registration • Sub-programme 1.2 – National Function-based Forest Classification **2. Forest Resource Management and Conservation** • Sub-Programme 2.1 – Forest Management Plan • Sub-Programme 2.2 – Development and Management of Production Forests • Sub-Programme 2.3 – Monitoring, Assessment and Reporting for SFM • Sub-Programme 2.4 – Biodiversity and Wildlife Conservation • Sub-Programme 2.5 – Conservation and Development of Genetic Resources and Seed Sources • Sub-Programme 2.6 – Tree planting and Development of Forest Plantations • Sub-Programme 2.7 Development of Forest Product and Market Promotion • Sub-Programme 2.8 –Wood Technology Development and Forest Product Processing • Sub-Programme 2.9 – Forest Certification. **3. Forest Law Enforcement and Governance** • Sub-Programme 3.1 – Legal and Administrative Reform • Sub-Programme 3.2 – Law Enforcement and Forest Crime Monitoring and Reporting • Sub-Programme 3.3 – Rapid Response on Forest Crime Information • Sub-Programme 3.4 – Conflict Management System (to be developed and implemented from 2010). This programme will address conflict management capacity needs within forestry authorities, in order to prevent and respond to destructive forest based conflicts • Sub-Programme 3.5 –Monitoring, Reporting and Learning System (to be developed in 2010). A monitoring and reporting

	Objective 8: Apply modern sustainable management models adaptive to changing context **Objective 9:** Develop sustainable financing systems	**D.8 Strategic direction for objective 8:** Forest management regimes **D.9 Strategic direction for objective 9:** Sustainable financing	system will provide detailed programmatic implementation, checks and balances and learning, for efficient and sustainable performance. **4. Community Forestry Programme** • Sub-Programme 4.1 – Community Forest Identification and Formalisation • Sub-Programme 4.2 – Community, Institutional and Livelihoods Development • Sub-Programme 4.3 – Community Forestry Development Support. **5. Capacity and Research Development** • Sub-programme 5.1 – Institutional and Human Resource Development • Sub-programme 5.2 – Extension and Public Awareness • Sub-programme 5.3 – Research Capacity Building Development. **6. Sustainable Forest Financing** • Sub-programme 6.1 – Government Financing • Sub-Programme 6.2 – Income from Forest Sector • Sub-programme 6.3 – Income from the Private Sector and Community Forestry • Sub-programme 6.4 – Financing via Donors • Sub-programme 6.5 – Innovative Financing from Payments of Environmental services and Carbon Credit

Table 1B. Protected Area Management

Protected Area management principles (from 2008 PA Law)	Details
Types of Protected Areas (Article 7)	1. National Park 2. Wildlife sanctuary 3. Protected landscape 4. Multiple use area 5. Ramsar site 6. Biosphere reserve 7. Natural heritage site 8. Marine park The protected areas above shall be defined by a sub-decree.
Protected Areas Zonation (Article 11)	• **Core Zone:** A zone of high value for conservation of rare, endangered, vulnerable and threatened animal and plant species and a delicate ecosystem. [Relevant for 'reducing deforestation, reducing forest degradation and forest conservation under REDD+] • **Conservation Zone:** A zone next to the core zone, which is of conservation value for natural resources, ecosystem, slope, and natural landscape. Entry into this zone shall be by obtaining advance permission from the Natural Protection and Conservation Administration on site. Use of forest by-products for livelihood by the local community and indigenous ethnic minorities, which shall not cause harm to biodiversity, shall be under strict monitoring. [Relevant for 'reducing deforestation, reducing forest degradation and forest conservation' under REDD+] • **Sustainable Use Zone**: A zone of high value in national economic development that directly serves the purpose of management and conservation of the protected area and contributes to promoting the standards of living of the local community and indigenous ethnic minorities. [Relevant for 'reducing deforestation, reducing forest degradation, sustainable management of forests, and enhancement of forest carbon stocks' under REDD+] • **Local Community Zone:** A zone that serves the economic and social development of the local community and indigenous ethnic minorities who already have on-going activities, including housing, farming and vegetable gardening. Issuance of permit or land title or permission to use the land in this zone shall be certified by the Ministry of Environment. [Relevant for 'reducing deforestation, reducing forest degradation, sustainable management of forests, and enhancement of forest carbon stocks' under REDD+] The principles for zoning in any protected area shall be prescribed by Prakas issued by the Ministry of Environment
National Protected Area Strategic Management Plan (Articles 15, 16 and 17)	Ministry of Environment shall develop a National Protected Area Strategic Management Plan (NPASMP), which shall be endorsed by the RGC. This would be equivalent to the function the NFP fills for the Permanent Forest Estate. The NPASMP shall be updated at least every five years.
Individual Protected Area management plans (Articles 18 and 19)	Principles for protected area management plans will be decided by a Prakas of the Ministry of Environment.

Local Communities in Protected Areas (Articles 21-28)	• The State recognizes and secures access to traditional uses, local customs, beliefs, and religions of the local communities, and indigenous ethnic minority groups residing within and adjacent to the protected areas. • Access to traditional uses of natural resources and customary practices of local community and indigenous ethnic minority groups on family scale may be allowed within sustainable use zone and conservation zone following guidelines which shall be prescribed in the Prakas of the Ministry of Environment • Community Protected Areas co-management agreements with local people should be developed in the sustainable use zone, based on a draft prakas exists to be approved
Protected Areas Fund (Article 32)	Established by sub-decree and co-chaired by Minister of Environment and Minister of Economy and Finance.
Concessions and non-profit activities in Protected Areas (Article 35)	A Prakas/Guideline will be drafted and enacted by the Ministry of Environment that specifies the procedures to be followed for permitting non-profit activities within PAs. Such a Prakas could spell out the procedure for granting REDD+ related and other types of conservation easements within PAs, contracted administrator type arrangements, etc.

2. Protected Areas

The National Protected Areas Strategic Management Plan is mandated by the new 2008 Protected Areas Law as the overarching management framework for Protected Areas. Development of this Management Plan is supposed to commence in the second half of 2010, with financial and technical support from UNDP. Even in its absence, elements of the framework are clear from the subsidiary regulations mandated by the 2008 Protected Areas Law (which have also yet to be developed). This includes (see Table 1B):

- Development of individual protected area management plans linked to a National Protected Area Strategic Management Plan;
- Zonation of Protected Areas into core, conservation, sustainable-use and community zones, where natural resource extraction, agriculture and investment activities are permitted in the last two zones subject to conditions and regulations;
- Continued establishment of Community Protected Area (CPA) agreements with local communities for local management of natural resources in the sustainable-use zone (noting that the CPA *prakas* has yet to be passed); and
- The establishment of a Protected Areas Fund to be co-managed by MoE and the Ministry of Economy and Finance.

Writing the National Protected Areas Strategic Management Plan and development of the necessary subsidiary regulations to enact the policy framework are priorities for the immediate future if the 2008 Protected Areas Law is to be implemented.

3. Fisheries

The Strategic Planning Framework for Fisheries 2010-2019 sets out several key goals for the fisheries sector including Goal 3: the fisheries domain and associated resources are in a healthy and resilient condition and sustainably managed. Co-management, with the full participative involvement of local people throughout the process, is a fundamental principle of this goal. Under the goal, key indicators include (3.2) the mapping, demarcation and protection of flooded forest, (3.5) the area of critical fisheries habitats under sustainable management, (3.8) the strengthening of Community Fisheries to conduct effective Natural Resource Management, and (3.9) the impact of regulation on inland fisheries protected areas. Achieving these indicators would lead to reductions in the rates of flooded forest and mangrove loss, and potentially improvements in the overall area through replanting and regeneration (indicator 3.5). The Strategic Planning Framework is implemented through the 3-year Fishery Development Action Plan.

4. Community Management of Natural Resources under the Forestry, Fisheries and Protected Areas Laws

Key aspects of these new laws, policies and subsidiary regulations include an explicit recognition of the rights of local communities and the importance of local community management of natural resources, through Community Forestry agreements (CFs, in Production Forests within the Permanent Forest Reserve), Community Fishery agreements (CFis, in fisheries areas) and Community Protected Areas (CPAs, in Protected Areas). Although the details of these agreements vary, they all provide for some measure of local management of natural resources for a period of 15 years for CFs and CPAs and 3 years for CFis. Ownership of the forest resources themselves remains with the state. These community natural resource management strategies are seen by government and development partners alike as one means to reverse the trend of forest loss and the negative impacts this has on livelihoods of poor rural Cambodians.

5. Land

The 2001 Land Law sets out a comprehensive system of land classification and land ownership rights. It includes important provisions on social and economic land concessions (SLCs and ELCs), indigenous land rights, land registration, and land dispute resolution. The Land Law also authorises the enactment of a series of important sub-decrees and other legislation. The significant elements of this law for the forestry sector are three-fold:

1. definition of state public property
2. definition of state private property

3. definition of indigenous property under the collective ownership category

The law distinguishes between state land in the public domain, such as forests and PAs, and state land in the private domain, which provides the legal mechanism for the granting of economic (agro-industrial production) and social land concessions. The 2005 Sub-Decree #118 on State Land Management provides the framework for state land identification, mapping, registration and classification and notes where additional administrative guidelines are required.

The RGC adopted a declaration on Land Policy in July of 2009, which lays out broad principles and goals relating to land management principles in the country. While this policy does not mention the forestry sector specifically, or management of forest resources in the country, it does state that the process of State land registration (both State public and State private) should be accelerated, and also calls for the development of a nationwide Land Information System (LIS) that is available for public reference.

As part of the Land Information System, the policy calls for the "establishment of a geology information system and soil classification based on natural characteristic of land," along with the development of a unified Geography Information System across the country under the coordination of the Ministry of Land Management, Urban Planning, and Construction (MLMUPC). According to the policy, the MLMUPC shall create a unit in charge of printing and distributing master maps, continue to install a Geodetic Network throughout the country and create a Leveling Network, and also establish a Permanent GPS Base Station.

The Land Policy further states that State land trustee authorities, such as the Forestry Administration (the FA being the State land trustee authority for the Permanent Forest Reserve) or Ministry of Environment (the MoE being the State land trustee authority for Protected Areas), shall provide the Ministry of Economy and Finance (MEF) with an annual inventory so that it may produces reports on the use of state land for the Royal Government. The policy indicates that the public can receive this information from relevant State institutions, and that State land trustee authorities, along with territorial authorities at all levels (Provincial, District, Commune) shall be responsible for protection and ensuring accountability for public and private State land management.

6. Indigenous Land Titling

Registration and titling of lands of Indigenous Communities was recognised under the 2001 Land Law, with further procedures out in 2009 Sub-Decree # 83 on Procedures of Registration of Land of Indigenous Communities. Prior to land registration, indigenous communities must complete an initial evaluation by the Ministry of Rural Development and then formally register with the Ministry of Interior. Under Indigenous Land Titling, a registered group of indigenous people with legally recognised by-laws can acquire collective ownership rights over state private and state public lands (e.g. forests). However, the indigenous community or individuals within the community cannot sell these lands. Alternatively, a group of indigenous people may choose not to register, in which case they remain eligible for individual private ownership of land.

7. Draft Spatial Planning Policy

A first draft of the Spatial Planning Policy was completed in 2010. Although the final form of the policy is not clear, there are already provisions that stress the importance of the sustainable management of natural resources in the country, along with general principles that link Commune Land Use Plans (CLUP) with District and Provincial Land Use planning processes, and the land use plans of State land trustee authorities, such as the Forestry Administration (Permanent Forest Reserve) or GDANCP (Protected Areas). These measures would link and integrate top down and bottom up land use decision making processes, and if implemented successfully would ensure transparency and the participation of all stakeholders in land-use decision making processes in the country.

8. Climate Change

Cambodia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 and acceded to the Kyoto Protocol in 2002. The first formal communication with UNFCCC also took place in 2002 (for year 1994) and the National Adaptation Programme of Action to Climate Change (NAPA) was approved by Government in 2006. The second national communication to the UNFCCC (for year 2000) is currently being prepared. In 2003 the Ministry of Environment established an Office of Climate Change

and in 2006 the Government set up the National Climate Change Committee (NCCC), with representation of 19 Government ministries and agencies. The new Department of Climate Change in the Ministry of Environment, which was upgraded from the old office, is the Secretariat of the NCCC. The NCCC and the Department of Climate Change have the responsibility to coordinate development of climate change policies, including the planned Cambodia Climate Change Strategy and Action Plan (CCCSAP).

9. Financial Sector Development Strategy 2006-2015

The overall objective of the financial sector development strategy is to support the development of a sound market-based financial system to support resource mobilization, effective financial resource allocation, and broad-based sustainable economic growth in the Kingdom of Cambodia. The policy covers developments in the banking sector, including micro-finance institutions, development of a sound insurance industry, development of a financial securities market, and other priorities for creating a modern and efficient financial sector in Cambodia. While there is nothing in this policy that refers to forestry activities in the country, it should provide the global community with confidence that the country is making efforts to put in place financial mechanisms that meet the requirements of the international investment community.

10. National Water Resources Policy (2004)

In January of 2004, the RGC adopted the country's first National Water Resources Policy. This broadly worded document recognized the importance of water resources within Cambodia, and calls for the sustainable development, use and conservation of these resources throughout the country. The major weakness with this policy document is that it does not spell out concrete actions that are to be taken, what timelines are involved or what institutions, agencies or departments are responsible. The only Ministry that is mentioned is the Ministry of Water Resources and Meteorology, and only in a very limited sense. Links between water resources and forest resources management is also very limited, with only passing reference in a few locations on how mismanagement of forest resources or forestry activities (logging, both legal and illegal) in general can have a negative impact on water resources in the country.

Government-Donor Coordination

RGC's Strategic Framework for Development Cooperation Management for the Forest Sector sets out the principles for aid coordination in the forestry sector, in line with the Paris Declaration on Aid Effectiveness (2005). The framework is based on the RGC's Framework Cooperation Management Strategy and the Declaration by the Royal Government of Cambodia (RGC) and Development Partners (DPs) on Enhancing Aid Effectiveness (2006). The framework and the declaration aim to improve aid effectiveness through strengthened national systems and procedures, aid coordination and resource mobilization mechanisms that are based on principles of Cambodian leadership, ownership and mutual accountability to achieve RGC's priorities as set out in the Rectangular Strategy, the NSDP and the CMDGs. Within the forest sector, this will be achieved by following ten principles, including: alignment with the development priorities of the RGC, in particular the NFP; development partners shifting from project-based to program-based approaches that shall eventually be funded through budget support; coordination through the Technical Working Groups (TWGs); all programs including capacity building to RGC institutions and being based on existing RGC institutional mechanisms; programs should be harmonized so as not to create excessive burden on RGC administrative and management systems; and leadership by the RGC.

The main Government-donor coordination mechanism is the Technical Working Group on Forestry and the Environment (TWGF&E), which is co-chaired by the Forestry Administration and a representative selected by development partners (currently the Danish International Development Agency, Danida). The TWGF&E includes members from relevant ministries (Forestry Administration, Ministry of Agriculture Forestry and Fisheries, Ministry of Environment, Ministry of Economy and Finance, Ministry of Land Management, Urban Planning and Construction, Ministry of Industry, Mines and Energy, Ministry of Commerce and Ministry of National Defence), development partners (AFD, DANIDA, DFID, JICA, FAO, UNDP, USAID and World Bank), civil society and NGOs.

The TWGs regularly set Joint Monitoring Indicators (JMIs) for the Cambodia Development Cooperation Forum (CDCF), which is the annual high-level meeting between the RGC and development partners. The 3rd CDCF meeting in June 2010 proposed four activities to contribute to the overall output indicator "Promotion of the NFP implementation at both national and sub-national levels, at least 75% of all funds

to forest sector should be aligned to NFP framework". One of the four activities is "Cambodia REDD Readiness Road Map approved and started implementation" with the associated action "Produce legal procedures and legislations for REDD". These activities are supposed to be implemented over the 18 months between July 2010 and December 2011.

Summary

The RGC's existing policy and legal framework provided by the Rectangular Strategy, the NSDP, and the various sectoral policies, laws and subsidiary regulations provide a sound platform for development of National REDD Readiness. According to the decisions of the RGC, the National REDD should be developed following a program-based approach, and be implemented according to framework provided by the NFP, the planned National Protected Areas Strategic Management Plan, the Strategic Planning Framework for Fisheries, and existing decentralized land and natural resource management strategies. REDD activities should be coordinated by the National Climate Change Committee, as the highest-level inter-ministerial committee for climate change policy.

Development and implementation of the National REDD Readiness plan is one of the four key activities for the Forestry sector during 2010-2011, under the Government-Donor Joint Monitoring Indicators. There is therefore strong support from Development Partners for national REDD readiness activities.

National Regulatory framework with respect to REDD+ under current laws

Whilst the legal framework for management of forest resources is clear (see the description in Component 1a), the national coordination and regulation framework with respect to REDD+ is not yet fully defined. Nevertheless, the general framework can be determined based on the existing management and regulatory jurisdictions of relevant Government ministries and institutions. Additional processes will need to be established during the national REDD+ Readiness process to clarify the decision-making authority of various State institutions and create appropriate regulatory procedures and guidelines where needed.

1. Forest Carbon

The state entrusted authority for the forest carbon depends on the forest designation (see Figure 1 in Component 1a). MAFF has general jurisdiction over forests and forest resources in the Kingdom of Cambodia (Article 3 of the 2002 Forestry Law). The FA is the designated Government Authority with jurisdictional management *and* regulatory authority over the Permanent Forest Reserve. The FA also has regulatory authority over the Permanent Forest Estate which includes both the Permanent Forest Reserve and forest resources located on privately owned land, or what are commonly referred to as private forests[83]. Based on the two exclusions in Article 3 of the 2002 Forestry Law, provisions in the Law on Environmental Protection and Natural Resources Management, the Protected Areas Law, and the Fisheries Law, management and regulatory jurisdictional authority over forest resources located in Protected Areas is under the Ministry of Environment, while management and regulatory jurisdictional authority over flooded forest resources and mangrove areas located outside of PAs is under the Fisheries Administration/MAFF.

Under 2008 Subdecree #188[84] (amending the 2000 Sub-Decree #17 on the Organisation and Function of MAFF) the Forestry Administration's general responsibilities for forest carbon are specifically:

- conducting assessments to determine the quantity of national forest carbon stocks; and
- developing and arranging for forest carbon trades and forest services to increase revenue for effective forest operations and development (Article 4 of 2008 Subdecree #188).

The Forestry Administration therefore currently has authorization to develop forest carbon sales, however based on the law this applies only to the Permanent Forest Estate that lies under the jurisdiction of the FA. Based on the two exclusions in Article 3 of the Forestry Law, management of Protected Areas is

[83] The Permanent Forest Estate consists of the Permanent Forest Reserves and Private Forests. (Forestry Law, Article 10)

[84] The full title of 2008 Subdecree #188 is: "Sub-Decree on making the General Department of the Ministry to General Secretariat, Promoting Forestry Administration and Fisheries Administration to the status equivalent to General Departments, Promoting Department of Agriculture and Land Improvement to General Department of Agriculture, and making the General Department of Rubber Plantation to General Department of Rubber, under the management of the Ministry of Agriculture, Forestry and Fisheries."

under the Ministry of Environment and flooded forest and mangrove areas fall under the jurisdiction of the Fisheries Administration of MAFF.

In addition to the roles and responsibilities relating to forest carbon trades delegated to the FA in Sub-Decree 188, the FA was earlier designated as the agent of the RGC for arranging the sale of forest carbon credits from the Oddar Meanchey REDD+ pilot project, under the Council of Ministers Circular (*SaraChor*) #699, 26 May 2008. The RGC also decided that revenues from the Oddar Meanchey project REDD+ carbon credit sales should be used to (a) improve the quality of the forest, (b) maximize the benefit flows to local communities who are participating in the project activities, and (c) study potential sites for new forest carbon credit REDD projects. Revenues are to be channeled through the Technical Working Group on Forestry and Environment (TWGF&E) during the first five years of the project.

While MAFF, MoE and the relevant state entities that exist within these Ministries of the RGC (FA, FiA, GDANCP, etc.) are the state authorities entrusted with forest resources management in the country, they do not have the right to sell, lease, transfer or otherwise dispose of these state properties without direct permission from the RGC, previously delegated authority to do so from the RGC, or delegated authority to do so from the legislative branch of government.

The Ministry of Economy and Finance (MEF) acts as the executive agency of the RGC in managing state properties (including forest carbon) in terms of selling, leasing, transferring, and other arrangements, and granting of various state concessions or contracts on management of state property. MEF if also responsible for maintaining an inventory of state properties, management of state revenue and the national budget. As a consequence, government trust funds are either chaired or co-chaired by MEF, including the Commune/Sangkat Fund, the National Forestry Development Fund and the Protected Areas Fund[85].

Private forest owners, either individuals or recognized indigenous communities with communal title, have the right to sell their own forest carbon.

2. Climate Change and the UNFCCC

The Ministry of Environment is the primary government agency responsible for international environmental treaties, including climate change and the UNFCCC. MoE chairs the National Climate Change Committee (NCCC), the national coordinating body, which was established in 2006 with representation of 20 Government ministries and agencies, with the Prime Minister as the Honorary Chair. The NCCC is responsible for preparing, coordinating and monitoring implementation of the Royal Government policies, strategies, regulations, plans and programs related to climate change. The NCCC's roles and responsibilities include (2010 Subdecree #99, replacing 2009 Subdecree #174 and2006 Subdecree #35):

1. coordinating and cooperating with concerned ministries and institutions in the preparation of draft policies, strategies, regulations, plans and programs on climate change, including the National GHG Reduction Plan and Climate Change Adaptation Plan for approval by the Royal Government;
2. promoting and encouraging integration of climate change issues into concerned policies, strategies, regulations, plans and programs;
3. promoting and encouraging transfer of appropriate technologies and renewable energy, conservation and improvement of carbon sinks;
4. determining the national negotiation positions and strategies for participation in international negotiations on climate change;
5. managing and coordinating the CDM of the Kyoto Protocol; and
6. coordinating and monitoring implementation of projects, programs and activities related to climate change.

Therefore, the NCCC's role is primarily focus on coordinating, monitoring and promoting in cooperation with concerned ministries and institutions of the RGC.

[85] While mandated under Article 62 of the Forestry Law (2002) and Article 32 of the Protected Areas Law (2008), the RGC has yet to issue the necessary Sub-Decrees that would lay out the organizational structure, roles and functions of the National Forestry Development Fund nor the Protected Areas Fund Committees.

The Department of Climate Change, which is part of the General Department of Administration for Nature Conservation and Protection (GDANCP) of MoE acts as the secretariat of the NCCC and has the following relevant roles and responsibilities (see Art. 4 of 2009 Sub-Decree #175 amending 1997 Sub-Decree #57 on MoE Organization and Function):

- developing national strategies, action plans and policies and regulations related to climate changes in cooperation with concerned institutions;
- implementing UNFCCC and decisions under the convention;
- preparing national reports and greenhouse gas inventories of Cambodia under UNFCCC;
- studying and assessing the potential for reducing GHG emissions and promoting implementation of GHG reduction projects using appropriate technologies;
- promoting mainstreaming/integrating climate change issues in to the national development plan and sectoral plans;
- coordinating implementation of CDM and carbon credit projects;
- proposing projects and programs and coordinating, monitoring and evaluating implementation of all projects and programs related to climate change;
- serving as focal point for the UNFCCC, Kyoto Protocol, the CDM, international negotiations on climate change, and preparing the national position for these negotiations;
- serving as secretariat of NCCC;
- cooperating with concerned institutions in the establishment and management of climate change trust funds and carbon credit policies; and
- strengthening cooperation among national institutions, development partners, civil society and the private sector in implementing measures to respond to climate changes as well as for effective implementation of decisions of the UNFCCC.

It should be noted that the Department of Climate Change's role is coordinating, monitoring, evaluating implementation and working in cooperation with concerned ministries and institutions of the RGC on issues relating to climate change.

The main exception to the above statement is that MoE is directly responsible for the CDM of the Kyoto Protocol, for which MoE is the interim Designated National Authority. Reforestation is currently eligible as a project type under the CDM, although the majority of reforestation activities would fall under the authority of the FA.

In summary, the Department of Climate Change of MoE is responsible for coordinating the development and implementation of climate change policies. In addition, the Department is responsible for several functions relevant to REDD+: reporting to the UNFCCC, preparing national greenhouse gas inventories (including the initial and second national communications), and coordinating implementation of the CDM. The NCCC is the overall national coordination body for all climate change related policies and activities.

3. National REDD+ Reference Scenario and REDD+ Monitoring

The Reference Scenario is the baseline against which national REDD+ performance will be measured. In the language of the UNFCCC texts this is called the Reference Emissions Level (REL, where emissions refers to activities such as deforestation) or the Reference Level (RL, which includes both emissions and removals, where removals refers to activities that remove greenhouse gases from the atmosphere, such as reforestation). The REDD+ Monitoring System measures country performance against the Reference Scenario, and is often called Monitoring, Reporting and Verification (MRV). MRV includes measuring reductions in greenhouse gas emissions (e.g. due to deforestation) and increases in removals (e.g. due to sequestration), and MRV of REDD+ impacts, including REDD+ revenues, social and biodiversity impacts.

With respect to forest carbon monitoring, the FA is responsible for (Forestry Law 2002, 2008 Subdecree #188):

- collecting scientific, economic, social and environmental data related to state forests; and
- conducting assessments to determine the quantity of national forest carbon stocks.

MoE is responsible for preparing national greenhouse gas inventories (including national communications to the UNFCCC) and reporting to the UNFCCC (2009 Subdecree #175). This includes generating data on emissions factors. National definitions of forests and classes of forests are set by MAFF.

Setting the Reference Scenario involves technical assessments of trends in forest cover and carbon stocks (measured by the FA/MAFF and MoE), including data on drivers of deforestation, land-use plans, and so on, which are held by other Government agencies such as the National Institute of Statistics and MLMUPC (for land-use plans). The Cambodia Reference Scenario will eventually be set through international negotiations under the UNFCCC and/or potentially other mechanisms that may be established. International climate change negotiations fall under the jurisdiction of MoE and the NCCC, and potentially the Ministry of Foreign Affairs.

4. Forest and Land classification and registration

Forestland classification and registration is important for REDD+ because these processes formally legitimize management options and ownership decisions. The Ministry of Land Management, Urban Planning and Construction (MLMUPC) has various responsibilities relating to land management including (2001 Land Law, 2009 Land Policy):

- Cadastral administration of state land (public and private state land) and individuals' private land registration, including indigenous communal land titles; issuing land titles throughout Cambodia;
- Carrying out cadastral surveying and mapping;
- Administrating all kinds of maps of Kingdom of Cambodia to national mapping standards; and
- Geographical Information Systems (GIS) coordination.

Under the 2001 Land Law and 2002 Forestry Law the majority of forest resources and some of the land used for reforestation is classified as state public or state private property. The Sub-Decree on State Land Management established a process for determining definite ownership of any land parcel, including a process to adjudicate and resolve disputes (2005 Subdecree #118). By default any land listed in a state property inventory (e.g. a MAFF map of the permanent forest reserve) shall be considered as preliminary evidence that can be used by concerned state agencies to support their claim that it is state land under the Cadastral land registration procedure. MLMUPC is responsible for providing technical assistance to the land registration process, but decisions are made by the Cadastral Commission, with final decisions on disputes settled by the Council for Land Policy. MLMUPC manages the register of all land properties in the country and issues title/ownership certificates to private individuals or communities for immoveable properties they own.

MAFF and FA is responsible for delineating, demarcating and registering the Permanent Forest Reserves in cooperation with MLMUPC, territorial authorities and local communities (see Art. 9 of 2002 Forestry Law and 2005 Sub-Decree #53). This process includes classification of the permanent forest reserve into protection forests, various types of production forests (including community forests) and forests for conversion. Once complete, these areas should then entered onto the land register by MLMUPC. The final stage of the process is an announcement by sub-decree of the RGC for the forest area.

Similarly, MoE is responsible for working with MLMUPC to demarcate the boundaries of PAs. The demarcation of the zones within it is approved by a sub-decree of the RGC (2008 Protected Areas Law).

5. Land concessions

The Land Law authorises the granting of land concessions for either social or economic purposes. Land concessions must be based on a specific legal document, issued by the competent authority (in the case of forest, either MAFF or MoE) prior to the occupation of the land, and must be registered with the MLMUPC. There are three main types of land concessions in Cambodia:

- Social Land Concessions (SLCs) – under which beneficiaries can build residential constructions and/or cultivate State lands for their subsistence; SLCs are limited to 10 hectares per family and after five years the land becomes their private property if it has bee developed properly.
- Economic Land Concessions (ELCs) – under which beneficiaries can clear land for agri-industrial businesses; ELCs are limited to a maximum area of 10,000 hectares and a maximum duration of 99 years.
- Use, development or exploitation concessions – includes fishing, mining concessions, port concessions, airport concessions, industrial development concessions.

The Sub-Decree for SLCs regulates allocation of state private land to poor communities and households. The Council for the Development of Cambodia is responsible for authorising investment projects to be implemented under concession contracts. In general, these apply to infrastructure projects.

According to the 2001 Land Law, ELCs can only be granted over State private land. ELCs granted prior to the passage of the Land Law are to be reduced to comply with the area limit, although an exemption may be granted if the reduction will compromise exploitation in progress. Article 59 further prohibits the granting of concessions in several locations, jointly exceeding the 10,000 ha size limit, in favour of the same person(s) or different legal entities controlled by the same person(s). The 2005 Sub-Decree #146 on ELCs provides criteria for granting ELCs (Chapter 2, Article 4). The land for an ELC must be registered and classified as state private land in accordance with the 2005 Sub-Decree #118 on State Land Management and the Sub-Decree on Procedures for Establishing Cadastral Maps and Land Register or the Sub-Decree #48 on Sporadic Registration. An ELC may be granted only on lands that meets all of the following four criteria:

1. Land use plan has been adopted by the Provincial-Municipal State Land Management Committee and the land use is consistent with the plan
2. Environmental and Social Impact Assessments (ESIA) have been completed with respect to the proposed land use and a development plan has been created
3. Land has solutions for resettlement issues, in accordance with the existing legal framework and procedures. The Contracting Authority shall ensure that there will not be involuntary resettlement of lawful land holders and that access to private land shall be respected
4. Land for which there have been public consultations, with regard to ELC projects or proposals, with territorial authorities and residents of the locality.

The Contracting Authority for ELCs is MAFF.

Evaluation of ELC proposals is based on the following criteria:

- Increase in agricultural and industrial-agricultural production by using modern technology
- Creation of increasing employment
- Promotion of living standards of local and indigenous people
- Continuous environmental protection and natural resource management
- Avoidance or minimisation of adverse social impacts
- Linkages and mutual support between social land concessions and ELCs
- Processing of raw agricultural materials, to be specified in the concession contract.

ELCs must be exploited within 12 months of being granted, or will be considered cancelled. ELCs granted prior to the Land Law must be exploited within 12 months of the law's entry into force, or shall be cancelled. Any failure to fulfil the conditions of an ELC shall be grounds for its withdrawal, and land concessionaires are not entitled to seek compensation for any damages resulting from the withdrawal of a concession.

Article 18 of the Land Law states that ELCs that fail to comply with the above provisions are null and void, and cannot be made legal in any form. Article 55 provides that ELCs may be revoked by the Government for non-compliance with legal requirements, and the land concessionaire may appeal this decision. Further, a court may cancel the ELC if a land concessionaire does not comply with clauses specified in the contract.

Initial legal analysis suggests that ELCs and SLCs are not appropriate modalities for implementing REDD+ because they are implemented on state private land and do not involve forest resources.

6. Concessions in Forest Areas

The Forestry Law was drafted and enacted by the legislative branch of Government at a time when there was a much attention in the country regarding the management and operation of the large commercial forestry concessions that had been granted in the country during the 1990s. As such, the provisions in this Law relating to forestry concessions are focused on the rules and procedures for such large-scale commercial forestry concessions. However, the provisions in Chapter 5 of the Forestry Law on forestry concessions could be interpreted as permitting REDD+ arrangements. Article 13 of the Law states the following in rather general language that could be interpreted broadly:

> "Upon the request of the Minister of Ministry of Agriculture, Forestry and Fisheries, the Royal Government of Kingdom of Cambodia may grant an area of production forest, not under use, to a forest concession through public bidding consistent with the National Forest Management Plan and after consultation with concerned Ministries, local authorities and communities. The public bidding procedures and required documents shall be determined by the Sub-Decree on Forest Concession Management."

For the provisions in the Forestry Law to be tailored to allow for REDD+ arrangements, utilizing the provisions relating to Forestry Concessions in Chapter 5 of the Law, it would be necessary to either amend or completely redraft the existing Sub-Decree on Forest Concession Management (2000).

The 2008 Protected Areas Law does not make any direct reference to concessions within established PAs, but there are provisions in the Law that need further development through the promulgation of subsidiary Sub-Decrees and Prakas that can be used to address concession type agreement processes within these areas of State public land property, and can certainly be tailored to include mechanisms for REDD+ concession arrangements or what could be referred to as "conservation concessions."

It is clear under the Protected Areas Law that investment and development activities are allowed within the Sustainable Use Zones of a PA. As stated in Article 11(3) of the Law, "the Royal Government of Cambodia may permit development and investment activities in this zone in accordance with the request from the Ministry of Environment." Such development and investment could be in the form of a long-term lease, such as the ninety-nine (99) year land lease contract for the development of Preah Monivong Bokor National Park[86].

7. Environmental and Social Impact Assessments

Under the current legal framework, REDD+ arrangements in natural forest areas might require the undertaking of an Environmental and Social Impact Assessment (ESIA) as prescribed by the relevant provisions found in the Law on Environmental Protection and Natural Resources Management (1996), Sub-Decree on Environmental Impact Assessment Process (1999), the Forestry Law (2002), and the NPA Law (2008). This is due to the fact that REDD+ arrangements, which are generally focused on the conservation and rehabilitation of forest resources, could possibly fit the description of activities or projects requiring an ESIA, depending on how such descriptions are interpreted by the government entities responsible for implementing them. Some activities that can be linked to REDD+ arrangements, such as certified sustainable commercial production forestry projects in the PFR, clearly fall under the requirements for conducting such reviews.

It should be noted that prior to passage of the Forestry Law in 2002, the phrase "Environmental Impact Assessment" (EIA) was used by the legislative branch of Government and the RGC to describe the review process necessary for proposed activities and projects, and this same terminology is reflected in the Sub-Decree on the Environmental Impact Assessment Process (1999). With passage of the Forestry Law in 2002, the legislature and RGC have changed the terminology used to ESIA, though there is no indication anywhere that responsibilities for the review process as required under the Law on Environmental Protection and Natural Resources Management (1996) and the Sub-Decree on Environmental Impact Assessment Process has been changed. What has changed is that those responsible for preparing ESIAs and MOE (being the Government agency with responsibility for reviewing, approving and monitoring ESIAs), must now look at more than just the potential environmental impacts of proposed projects or activities and how these impacts will be mitigated, but also must look at the social impacts of proposed projects or activities and how those impacts will be mitigated. In actuality, it was always a requirement that "health and public welfare" should be part of the review process, as highlighted in the paragraph below. In order to avoid any confusion, the ESIA terminology that the legislature and RGC has adopted since passage of the Forestry Law will be used throughout the remainder of this report.

[86] This long-term lease contract between the RGC and the Sokha Hotel Company (a Cambodian legal entity), which was executed in 2007, could be considered as one of the 'other types of concessions' mentioned in Article 50 of the Land Law (2001).

The Law on Environmental Protection and Natural Resources Management generally refers to requirements for conducting ESIAs for both private and public projects or activities, delegates to MoE the responsibility and authority to review ESIAs prior to final project or activity approval by the RGC, with the scope and size of projects or activities that require an ESIA being defined by Sub-Decree. Procedures have been promulgated by the RGC that require an initial ESIA be conducted by project sponsors for activities and projects that have been listed, with a full-scale ESIA review and pre-feasibility study required if there is a determination by MoE that the activity or project would have a serious negative impact on natural resources, ecosystems, *health or public welfare*. Full-scale ESIA reviews shall include the preparation of Environmental and Social Management Plans by the project or activity sponsor, which are to be continuously monitored by MoE during the activity or project construction, implementation and closure. Service fees are to be paid by the project sponsor to cover the cost of initial and full ESIA reviews, including the cost of ongoing monitoring of the Environmental and Social Management Plans, with such fees being deposited directly into the national treasury in accordance with the Law on Public Finance Management (2008).

The list of projects and activities requiring an ESIA include the following that might be relevant to REDD+ implementation in the country:

Activity/Project	**Size**
Mining	Any Size
Concession forests	≥ 10,000 Hectares
Logging	≥ 500 Hectares
Land Covered by Forests	≥ 500 Hectares
Flooded and Coastal Forests	All sizes
Tourism Areas	≥ 50 Hectares
Golf Courses	≥ 18 Holes
Construction of Bridges and Roads	≥ 30 Tones weight
National Road construction	≥ 100 Kilometers

The Sub-Decree on Environmental Impact Assessment Process is only four pages in length, and the currently existing Prakas on Guidelines for Preparing the Environmental Impact Assessment Report (2000) is only one page in length and no useful guidance with regards to the ESIA process in Cambodia other than stating that "the Department of Monitoring and Environmental Impact Assessment shall be responsible for reviewing, monitoring and take action to have the project owners comply with the environmental management plan during the periods of construction, operation and closure of projects as stated in an ESIA report," and shall also be responsible for developing further guidelines for preparing an ESIA report. No additional guidelines for preparing an ESIA report appear to have been prepared.

The Forestry Law does not add much in the way of clarity regarding whether REDD+ implementation arrangements require an ESIA, and simply states that, "consistent with the Cambodian code of forest management and the Environmental Protection and Natural Resources Law, an Environmental and Social Impact Assessment shall be prepared for *any major forest ecosystem related activity that may cause adverse impact on society and environment.* Prior to passage of the Forestry Law, the Department of Forestry and Wildlife, with assistance from the AusAid Mission to Cambodia, produced a guideline manual for conducting an ESIA in relation to forest concessions. This manual clearly states that such ESIAs are to be reviewed and monitored by MOE in accordance with the law.

Article 44 of the Protected Areas Law (2008) states the following:

> To *minimize adverse impacts on the environment and to ensure that management objectives of protected areas are satisfied*, an Environmental and Social Impact Assessment shall be required on all proposals and investment for development within or adjacent to protected area boundary by the Ministry of Environment with the collaboration from relevant ministries and institutions.
>
> The procedures for Environmental and Social Impact Assessment for any projects or activities shall comply with provisions pertaining to the process of Environmental and Social Impact Assessment.

Other Laws and Sub-Decrees also make reference to the requirements for conducting ESIAs. For example, Article 7 of the Sub-Decree on Economic Land Concessions (2005, amended 2008) clearly states that the Contracting Authority (MAFF) may initiate an ELC process by taking the following steps (not all steps in Article 7 are reiterated here):

> "Arrange for the conduct of an initial ESIA for the proposed economic land concession project.
>
> If the initial ESIA indicates a medium or high degree of adverse impact, arrange for the conduct of a full environmental and social impact assessment."

ESIAs for REDD+ related implementation activities aimed at protecting natural forestland resources could very well be required based on the provisions found in the existing legal framework, though there is no clear statement saying that they are. What is urgently needed in Cambodia is a comprehensive review and update of the Sub-Decree and Prakas relating to ESIAs in order to remove any areas of confusion relating to this process, not just for REDD+ implementation purposes, but for any activities or projects proposed in the country. Until that time, any investors or project implementers should simply check with the relevant authorities to ask whether an initial EIA or ESIA is required for their particular activity or project if there is any uncertainty about the need to conduct such a review.

8. National Coordination Committees

In addition to the NCCC, other relevant inter-ministerial coordinating bodies include:

- Council for Land Policy (2009 Subdecree #35): Chaired by MLMUPC with 23 members, under the Supreme Council of State Reform, with responsibility for resolving conflicts over state land classification (e.g. as state public or state private land) and determining which government agency has primary responsibility for particular programs and policies, based on consensus of all the members based on existing laws and regulations.
- National Authority for Land Disputes/Conflict Resolution (2006 Royal Decree): Chaired by representative of the Prime Minister with 22 members, responsible for facilitating resolution of land disputes and land conflicts between private individuals as well as between state agencies/institutions, for both registered and unregistered land.
- Cadastral Commission (2001 Land Law): responsible for facilitating and adjudicating on land ownership/possession disputes over unregistered land/land parcels with no land certificate.
- National Committee for Land Management (1999 Subdecree #62): approving provincial land-use plans.
- National Committee for Addressing Disputes in Relation to Creation of Permanent Forest Reserve Areas: Chaired by MAFF and responsible for facilitating and reporting to the RGC on the resolution of land and/or forest ownership disputes during the process of classifying and registering the permanent forest reserve.
- Forest Land Encroachment Committee.
- National Committee for Subnational Democratic Development (NCDD): see above, Subnational Administration.
- Expropriation Committee (2010 Expropriation Law).

Note: This section is a summary summaries of two reports prepared for the Cambodia REDD+ Readiness process. For further information see:

Broadhead, J. and Izquierdo, R. 2010. Assessment of land-use, forest policy and governance in Cambodia. Report prepared by FAO as a contribution to the Cambodia REDD+ readiness process. FAO-Regional Office for Asia and the Pacific, Bangkok.

Oberndorf, R. and Nhean, M. 2010. REDD+ in the Cambodian context. An overview of the policy, legal and governance Frameworks impacting implementation. Report for the Cambodia REDD+ readiness process.

Annex 2b: REDD-plus Strategy Options

Annex 2c: REDD-plus Implementation Framework

Annex 2d: Social and Environmental Impact during Readiness Preparation and REDD-plus Implementation

Annex 3: Develop a Reference Level

Note: this section is taken from a report prepared by Winrock International for the Cambodia REDD+ Readiness process. Reference: Walker, SM, Casarim, F, Harris, N, and Brown, S. 2010. Cambodia REDD+ Roadmap: Development of a Reference Level and Design of a Monitoring System. Winrock International, Washington D.C., USA.

Objectives

The overall objective of this section is to develop a scenario for the reference level (REL) that projects emissions and removals of CO_2 into the future in the absence of REDD+ incentives. The REL, while based on historical information, will also reflect national circumstances and relevant policies as well as meet international standards and requirements. The REL will be developed in a way so that emissions and removals that are monitored in the future can be compared directly to the emissions and removals in the reference scenario—in other words there will be consistency between the approaches used for the REL and the MRV (Measurement, Reporting and Verification) system.

Accomplishment of this objective involves two sub-goals:

- Quantification of *historic emissions/removals* from deforestation, degradation and enhancement of carbon stocks for the proposed period between 2000 to 2010 at a national scale, using the IPCC framework, and spatially represented to reflect differences in sub national activities in use and cover of the land; and
- Development of *future trajectories* of emissions/removals over different time periods (e.g. 5 yr and 10 yr periods) and under different economic and development scenarios. This will take into consideration such factors as Cambodia's Rectangular Strategy for Growth, Employment, Equity and Efficiency – Phase II, Cambodia's National Strategic Development Plan Update 2009-2013, the Cambodia Millennium Development Goals[87], and the Cambodia REDD+ Strategies. Other current country indicators will also be taken into consideration, such as: GDP, population growth, agricultural expansion, industry growth, sectoral development plans, specific investment programs, and/or adjustment coefficients otherwise derived from such factors and data.

The National REDD+ Taskforce will need to track the international negotiations process during the implementation stage of the Cambodia R-PP so as to ensure work being done on this topic will meet the policy requirements. However, any process agreed to for setting a reference scenario will be based on the historic emissions as a starting point.

Outline of steps to make REL

An outline of the activities and steps that need to be accomplished to attain the objectives of this Section are presented the outcome chain diagram in Figure 1. The proposed steps in Figure 1 are essentially the terms of reference that would need to be accomplished to meet the objectives of this Section.

[87] See Annex 2a for further details on these three plans.

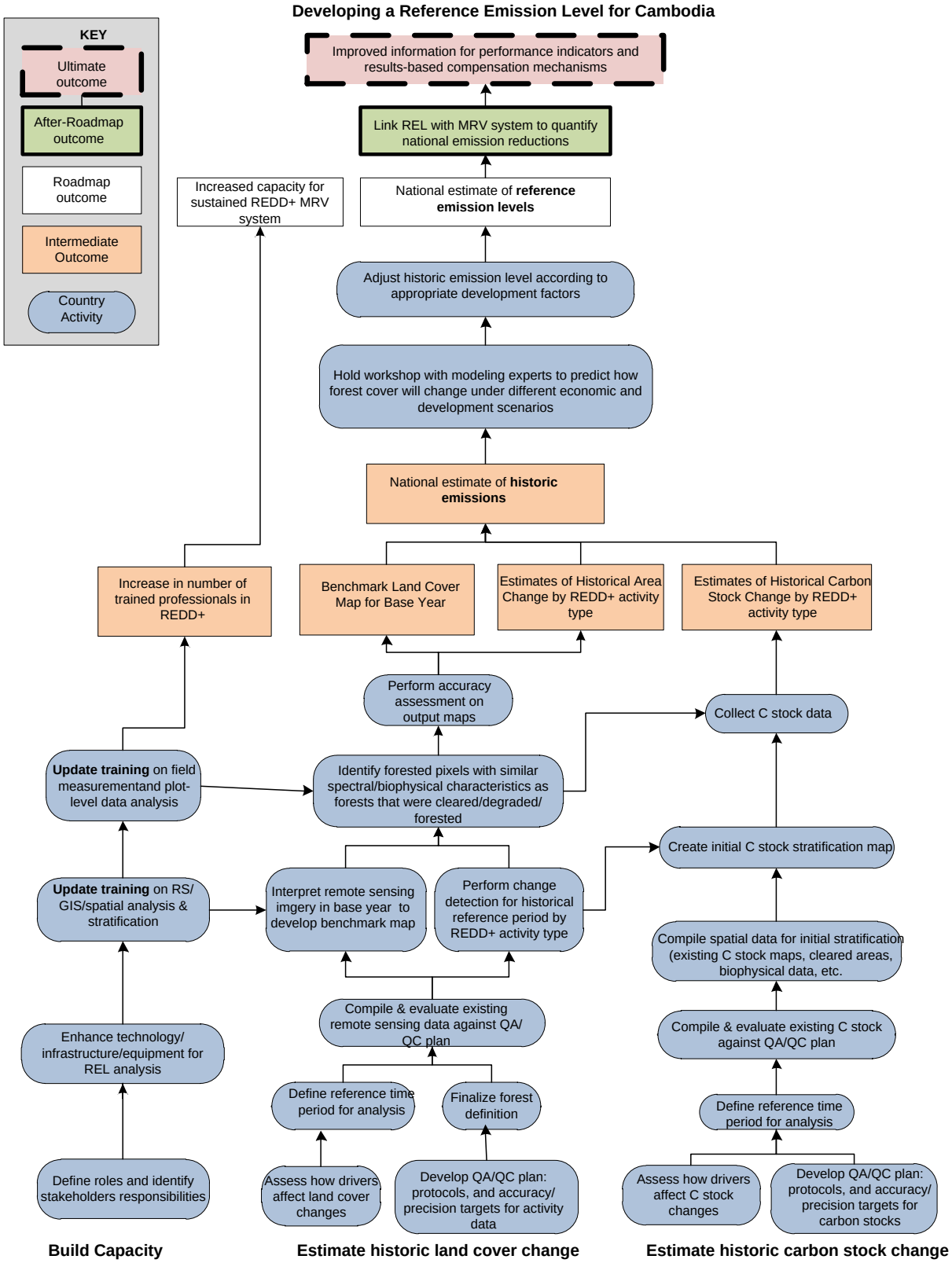


Figure 1 Outcome chain/TORs for developing the REL in Cambodia

3.1 Historical rates of Land-use and Land-use Change (Quantify Activity data)

Cambodia proposes to use Approach 3 under the IPCC for measuring activity data, requiring the collection of spatially explicit information on land use changes and the conversions among land uses. Existing land-use assessments for Cambodia are consistent with Approach 3.

The Landsat program has been the most useful of the many satellite systems designed for land cover monitoring because it is the longest running exercise in the collection of multispectral, digital data of the earth's surface from space. Fifteen Landsat scenes practically cover the whole of Cambodia, and due to long life of the Landsat program, along with the high spatial resolution the extensive archive of freely available data, and the compatibility with previously collected datasets in Cambodia, Landsat data are the ideal choice for mapping historical rates of deforestation at the national scale.

The land cover products available for Cambodia, based on a compilation of the existing remote sensing data, are given in Component 3. Despite the number of products on land cover, there is a lack of information on how the products were produced and validated and if validated what accuracies were achieved. Without such information, the usefulness and credibility of the products is questionable. Thus a key step under this task will be to further investigate how the map products were produced using data from 2002 and onwards and provide the appropriate documentation including whether supervised or unsupervised classification was used, number and type of land cover classes included, and accuracies attained. Given that additional pre-and post-2006 products will be needed to estimate historic emissions, ground data will need to be collected for the post-2006 products that also can be used to validate earlier products.

In addition to mapping deforestation, remote sensing has also been useful for mapping and monitoring indicators of forest degradation such as logging roads, fire scars, other forest canopy damages, and secondary forest recovery[88], all of which occur in Cambodia. However, the accuracy of mapping changes in forest cover for forests remaining as forests depends on forest stand characteristics, processes of degradation/enhancement, intensity of disturbance, timing of satellite imagery acquisition relative to the events, and spatial resolution of the imagery. Thus remote sensing can play an important role in mapping indicators that can be used to guide a field measurement program to understand the impacts of forest degradation and enhancements of carbon stocks. The MRV/REL Technical Team will need to commission or undertake research to investigate how remote-sensing can be used in Cambodia to estimate historic emissions from forest degradation.

The following are the proposed series of sub-steps Cambodia will take for mapping deforestation, forest degradation, carbon stock enhancement, and forestation for the historical reference period to be used for estimating historic emissions/removals. It is expected that advice will be solicited from national and international experts as needed.

Step 3.1a. Define the reference time period

The REDD+ Taskforce will need to establish an appropriate historical reference period. Given that recent exploitation of Cambodia's forests started with the declaration of the forestry concessions around 1997, which led to the construction of new roads into forest areas, it might be appropriate to use 1997/1998 as the base year. Use of the 1997/8 period would provide Cambodia with a 12-year baseline with data points every four years. The implications of this would need to be considered further before any decision is taken, and it should be remembered that the UNFCCC negotiation process has yet to provide guidance on the length of an appropriate historical reference period.

Step 3.1b. Perform change detection for the historical reference period

Imagery will be compiled and interpreted based on the selected definition of forest to create a land cover map with classes relevant to REDD+ activities and drivers. The years for which satellite data already exist are 2002 and 2006. Data will need to be acquired for 2010 at a minimum, which is already underway by

[88] GOFC-GOLD, 2009, A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation. GOFC-GOLD Report version COP15-1, (GOFC-GOLD Project Office, Natural Resources Canada, Alberta, Canada).

the Forestry Administration, and preferably 1998. A 1998 product will serve as the benchmark map for the historic period against which changes from 1998-2010 will be determined using standard remote sensing protocols for change detection. The 2010 product will be updated resulting in a benchmark map for future monitoring. Land cover change will be mapped over the reference period using the Landsat imagery (1998, 2002, 2006 and 2010+) using standard approaches and the expertise of staff within the Government agencies responsible.

Step 3.1c. Classification quality control and accuracy assessment

All map products will undergo quality control to ensure that the interpretation and classification provides accurate products. As shown in the outcome change (Figure 1), a plan for assuring quality of the mapping products will be developed and then used in this step. The selection of methodologies and algorithms for classification and accuracy assessments for mapping changes in forest cover (gains and losses) will be based on existing experience in remote sensing interpretation coupled with a review of peer-reviewed methodologies and discussions with the international remote sensing community. Visual interpretation of the imagery will be used to evaluate the success/effectiveness of the classification routines.

The accuracy assessment can be conducted by comparing maps of deforestation derived from remote sensing with field observations or high resolution aerial imagery. This will be done in collaboration with new initiatives already being implemented in Cambodia – e.g. the national forest inventory effort. For historical imagery (pre-2010), the use of existing aerial imagery and scattered very high resolution (<5 meters) imagery will be investigated. Standard methods used by the remote sensing community (e.g. described in the GOFC-GOLD 2009 Sourcebook[89]) will be used to assess the overall accuracies of the land cover classification to provide a statistically valid representation of map accuracy.

Based on results from the quality control step, the classification results will be adjusted either manually in the GIS or by adjusting the parameters used to assign Landsat spectral information to the forest and non-forest classes. All image processing methods and evaluation results will be permanently documented and recorded for verification and complete transparency.

Step 3.1d. Mosaic and stratify classification products

Individual Landsat products will be stitched together (15 Landsat scenes per point in time) to create the final wall-to-wall benchmark and change maps. In addition, these products will be stratified by forest type, ecoregion, etc. to facilitate integration with carbon products and to understand regional differences in rates and patterns of forest cover change. It is anticipated that, at a minimum, the following products will be created by: (1) deforestation and (2) forestation maps for 1998 to 2006 and 2006 to 2010+ (to a maximum of 2012). These maps will indicate areas of forest lost and forest gained during each census period for each stratum identified.

Maps of forest degradation and stock enhancement are more difficult to detect using Landsat imagery and require higher resolution imagery. Forest degradation was not taken into account during the preparation of the national land cover maps and therefore forest degradation has not been mapped at the national scale. Large-scale logging during the 1990s in many areas almost certainly has caused considerable forest degradation. Present day deforestation and forest degradation are particularly intensive on the boundary between agricultural and the major forests cover and in the flooded forest. The development of new access roads through isolated forest enables deforestation and degradation of primary forest. Methods for addressing degradation will be developed during the implementation stage of the R-PP, and taken into consideration in the planning of the National Forest Inventory plan.

Methods to assist in stratifying into area of degradation and enhancement of stocks have been described in the GOFC-GOLD Sourcebook. These methods use other spatial data layers such as transport networks, bio-geophysical characteristics of the landscape, population centers, already cleared land and

[89] GOFC-GOLD, 2009, A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gain and losses of carbon stocks in forests remaining forests, and forestation, GOFC-GOLD Report version COP15-1. Hence forth document referred to as: GOFC-GOLD, 2009

the like. Cambodia has abundant spatial data bases covering the bio-geo-physical, economic and transportation sectors present in its territory.

As a starting point for stratifying the forests into degraded or enhanced classes, a workshop of experts will be convened to plan a strategy for estimating emissions/removals from these activities during the historic time period. The workshop shall gather all REDD+ concerned partitions and define the information, data and preparation gaps that exist in Cambodia, and therefore the action plans to cover them.

3.2 Develop emission and removal factors for REDD+-related activities

Cambodia will aim for at least a Tier 2 level of data for its estimate of historic emissions/removal. The sub-sections below describe the steps we propose to collect Tier 2 level data for emission and removal factors to be pooled with the activity data collected in Component 4. The estimates would be based on data that has already been collected (see Component 3, Table 10) and new data collected as part of the MRV plan (Component 4 and Annex 4).

Step 3.2a. Develop QA/QC plan for emissions factors and protocols for carbon stock change data collection

A data archiving framework and Quality Assurance/Quality Control (QA/QC) plan will be formulated so that field data on carbon stocks measured at various locations and for various attribute combinations can be transparently and accurately mapped and tracked. Protocols for carbon stock change data collection will also need to be collected. he QA/QC plan and data collection protocols will be similar to or probably the same as that developed for the MRV plan (Component 4 and Annex 4). Relevant FA, MoE and FiA staff (as appropriate) will be trained on these methods

Step 3.2b. Inventory all existing historical data and evaluate against accuracy and precision targets

A number of analyses of Cambodia's forest have been conducted (see Component 3, Table 10). Some of these studies were conducted for proposed voluntary market carbon projects and therefore measurements cover only specific areas of the country. These studies must be evaluated to determine how such information can be used in creating historical emission factors. Some data may be able to be used directly to estimate the carbon stocks of a given forest type while other data may inform how such forest types should be stratified during further analysis and data collection. The datasets are fairly comprehensive for most of the major dryland forest types, but very little forest carbon stock data exists for flooded forest types and mangroves. Where historical data is not available, data collected as part of the MRV plan (Component 4 and Annex 4) will need to be used.

Step 3.2c. Identifying lands that underwent change in historic period (linking RS and field data)

There are numerous physical, biological and human factors that affect carbon stocks across a landscape and associating a given area of deforestation, forestation, or forest degradation with a specific carbon stock results in a more accurate and precise estimate of carbon emissions. Furthermore, the cost and time associated with sampling forest carbon stocks across the entire country would be substantial, the information of which may not prove valuable if the forests for which data are collected are under no threat of deforestation or degradation or undergoing small changes in stocks from previous disturbance. In fact, only the data pertaining to carbon stocks of the lands that underwent change or are expected to undergo change in the future is relevant in estimating historic emissions.

- For forests, only the areas that underwent deforestation/degradation/disturbance are relevant;
- For soils, only the soils carbon stocks needed for areas converted to/from annual cultivation.

Cambodia proposes to assess the suitability of the approach in the 2009 GOFC-GOLD Sourcebook that explains how to identify forested areas today whose carbon stocks represent the carbon stock of forests that have changed since the base year. The GOFC-GOD Sourcebook proposes that, the spectral characteristics of forested pixels (e.g. NDVI) in the remote sensing imagery that were changed over the historical reference period can provide information about the remaining forested pixels that share these same attributes when combined with other spatial data layers (such as proximity to roads and rivers, logging infrastructure, elevation, and proximity to population centers, already cleared areas and protected areas). Then, carbon stocks in these remaining forested pixels can be sampled as proxies for the carbon stocks in the pixels that were deforested, degraded or enhanced.

During this phase of the Cambodia R-PP implementation, Cambodia can use the data amassed for the REL to begin investigating the possibility of developing a national carbon stock table under the plans for the National Forest Inventory, which can be further developed during the implementation of the MRV plan[90]. This table will relate change data from remote sensing interpretation to a likely estimate of carbon stocks derived from field data. Steps 5-4a to 5-4c will result in a detailed plan outlining how estimates of carbon stocks of forests that have undergone change will be measured and estimated, including where measurements need to be made.

Step 3.4d. Carbon stock assessment

The stratification plan, sampling plan, and protocols developed from the prior steps will be implemented and the forest areas to be measured identified on a map. The sampling strategy adopted will ensure that carbon stocks measured in each stratum attain an acceptable level of accuracy and precision as defined in the QA/QC plan and field protocols. Results from the field measurements will be used to estimate emission factors for various land cover changes (deforestation, degradation, forestation, enhancement of carbon stocks) using the IPCC GPG framework, along with the estimated uncertainty around each emission factor.

3.3. Combine activity data with emission factors to develop total historical emissions

The purpose of this step is to estimate the annual historical emissions and removals, based on changes in carbon stocks, for the time periods in the reference time frame. These historic emissions and removals can be produced for any subnational scale such as by province or ecological zone or as well as nationally.

The IPCC framework will be used for this step, applying the stock change approach for deforestation and forestation, meaning that the area of change and the carbon stocks before and after the change event will be combined. In this circumstance the gain loss-approach will most likely be favoured for degradation and enhancement of carbon stocks. Rates of growth would account for carbon stock gains. For losses in carbon stock, data referring to timber harvests, removals of trees for charcoal/ fuel, and transfers to the dead organic matter pool due to disturbances would be used.

For fire, the IPCC AFOLU 2006 report (Chapter 2) provides detailed methods (equations and combustion factors for both CO2 and non-CO2 GHGs) that would be used. This would combine the area burned with the carbon stock before and after a burn along with IPCC default values for combustion and efficiency factors.

3.4. Develop future reference level based on national circumstances

The assessment of the different national circumstances is a key element for the application of the UNFCCC principle of “common but differentiated responsibilities” and it is the only factor (criteria) that has been used so far in the context of the UNFCCC to adjust human induced GHG gas related data.

The definition of the Cambodian national circumstances will be established in order to be used to adjust the historic data. This work will be led by the REDD+ Taskforce, in consultation with relevant stakeholders. The assessment of the Cambodian national circumstances will be based on the analysis of the socio-economic data (for examples see above), the REDD+ strategy analysis (see Roadmap Section 3) and on the analysis of future projections of Cambodia development and on potential changes in forest land cover.

Development of the future projections will require using modelling approaches to predict future land-use change, which will require international experts in the fields of financial and economic modelling to advise on modelling future reference emission scenarios. The impacts of development policies, global trends in demand and prices for Cambodia’s land based commodities, and other economic factors will be included in these models. A workshop will be held in this regard, to consult with national and international modelling experts and Cambodian Ministries related to planning and finance. The outcome of this

[90] For example, see Box 2.2.2 in the GOFC-GOLD Sourcebook (2009) that illustrates this approach. Available at: http://unfccc.int/files/methods_science/redd/methodologies/other/application/pdf/sourcebook_version_nov_2009_cop15-1.pdf

workshop would be a methodology by which the historic emissions can be projected over different time periods and under different economic and development scenarios, taking into consideration such factors as GDP, population growth, past and present agricultural expansion, forest industry growth, sectoral development plans, subnational development plans, specific investment programs, and/or adjustment coefficients otherwise derived from such factors and data.

Setting the Cambodia RL/REL is both a technical and a political challenge. Conseauently this work will be led by the REDD+ Taskforce in consultation with relevant stakeholders. This will require coordination and inputs from relevenat government departments, MRV/REL Technical Team members, national experts and university staff/researchers. National technical experts will be engaged and consulted with for their assistance in developing the data bases and models to derive adjustment coefficients to modify the historical emission levels for developing future trajectories.

Developing future trajectories will include such activities as:

- Organization by REDD+ Taskforce and MRV/REL Technical Team of an initial workshop to include staff from the relevant government departments, experts from national universities, and international experts to discuss the current thinking and methodologies for modelling future emissions scenarios based on historic emissions
- Convene a small focused national subgroup of experts from government, universities, and private sector in REDD+ and provide support as needed for them to design potential methodologies for modelling future projections (expected to develop at least 2-3 different methodologies to test appropriateness for Cambodia's situation)
- Obtain and collate the required data bases to implement the methodologies, test methodologies, share results with REDD+ Taskforce, and decide on a plan to move forward.
- Stay abreast of the international discussions and decisions on how reference scenarios for REDD+ are to be established.

3.5 Subnational RLs/RELs

The Cambodia REDD+ implementation framework (Component 2c) suggests that REDD+ will be implemented using the nested approach, with site or project-level activities in forested areas (e.g. a protected area or community forest) nested within provincial-level (subnational) REDD+ strategies, which contribute to the overall national REDD+ strategy. This requires development of the nested approach to RELs, so that subnational RELs contribute to the national REL. Establishment of the nested approach will require additional studies to understand how subnational RELs might be set, and working with selected pilot provinces to develop subnational RLs/RELs. Provinces with existing pilot REDD+ projects should be prioritised in order to understand how to operationalise the nested approach.

Annex 4: Design a Monitoring System

Note: this section is taken from a report prepared by Winrock International for the Cambodia REDD+ Readiness process. Reference: Walker, SM, Casarim, F, Harris, N, and Brown, S. 2010. Cambodia REDD+ Roadmap: Development of a Reference Level and Design of a Monitoring System. Winrock International, Washington D.C., USA.

4A. Monitoring of Emissions and Removals

Objective for Component 4A.

The overall objective of Component 4A is to develop a measurement, reporting and verification (MRV) system that allows for transparent and conservative accounting of emissions and removals of CO_2 through time that can be compared against the projected reference scenario. An important question to answer before designing a REDD+ MRV system is: "what should be monitored?" If the objective of the MRV system is to evaluate the degree to which Cambodia's candidate REDD+ strategies have or have not been effective in reducing GHG emissions and/or increasing removals, it is logical to think that monitoring indicators should be linked to each candidate REDD+ strategy. However, the implementation of an individual REDD+ strategy may have indirect rather than direct impacts on emission reductions. For example, an improvement in forest governance may have profound impacts on how forests are managed in Cambodia, yet developing a specific indicator to ascribe the impact of this action to reducing emissions or enhancing removals of CO_2 would be difficult. Examples of monitoring indictors related to candidate REDD+ strategies are presented in the main text that will be taken into consideration during the design of the MRV system.

The MRV section is composed of two phases — a MRV development phase and a MRV implementation phase. The outcome of the implementation of this component will be a functional MRV system for evaluating the performance of REDD+ interventions in Cambodia. The exact details of the MRV system will be adapted and finalized during the Cambodia R-PP implementation phase as it is tested at demonstration sites, but key features of the system design are presented as a starting point for further development. The design of the MRV system will also provide data and protocols to be used in the framework for estimating historical emissions in Component 3 (and Annex 3), as the methods for estimating emissions and removals during the monitoring period will need to be comparable to those used for estimating historical emissions, so that the performance of REDD+ interventions can be measured. Thus many of the steps outlined in Component 4A will carry over into Component 3.

Linkages between REDD+ strategies and monitoring system

Broadly, the REDD+ strategies proposed to Cambodia are based on existing policy frameworks, laws and subsidiary regulations, such as: (i) the National Forestry Programme (NFP) for the Permanent Forest Estate, including community forestry, protection forests, concession forests, etc., (ii) the National Protected Areas Strategic Management Plan for Protected Areas (under development) and, (iii) the Strategic Planning Framework for Fisheries for flooded forests and mangroves outside of protected areas.

Although REDD+ strategies are still under discussion and agreements, Table 1 below indicates the main lines on the ongoing discussion and methods and indicators that will be taken into account to monitor the particular needs of candidate REDD+ intervention strategies going forward. We propose that the essence of the MRV system will be to determine the degree to which the sum total of all REDD+ strategies implemented across Cambodia have or have not resulted in a reduction in emissions from the land use sector at the national scale. Therefore, the data to be monitored as part of Component 4 include changes in the area of each REDD+ activity class (deforestation, forestation, forest degradation, sustainable forest management, enhancement of forest carbon stocks) and the resulting changes in carbon stocks. Emission reductions will be verified at the national scale, but monitoring and reporting may be implemented at sub-national and local scales. Data collected at subnational scales will be integrated into the national accounting structure via a national data clearinghouse, where additional quality assurance/quality control measures are undertaken to ensure against double counting.

Table 1 Proposed methods to monitor change in area and carbon stocks of lands targeted for REDD+ strategies

Candidate REDD+ strategies	Methods to implement strategy	Methods to monitor effectiveness of strategy
Implementation of the National Forestry Programme	- Forest law enforcement and governance - Community forestry Programme - Forest demarcation, classification and registration - Forest resource management and conservation, including forest certification, production forest management, and reforestation/afforestation	Forestry Administration will manage use of remote sensing and GIS techniques, and perform field carbon stock assessments Community forest carbon monitoring in community-managed areas
Implementation of the National Protected Areas Strategic Management Plan	- Improved Protected area management - Community Protected Areas	Monitor forest cover change with remote sensing imagery over protected areas Community forest carbon monitoring in community-managed areas
Sustainable management of flooded forest and mangrove resources	- Community fisheries - Fisheries conservation areas - Sustainable management of habitat in fishing lots	Monitor area with remote sensing imagery Community forest carbon monitoring in community-managed areas
Develop payment for environmental services programs	- Establish program in cooperation with local communities for: watershed protection, reforestation, ecotourism, wildlife observation, etc.	Develop cooperative partnership with local and indigenous communities to perform on the ground surveys of carbon stock changes to be used by the national RS team in the FA or MoE
FLEGT	- Forest law enforcement and improved governance - Encourage systems of certification of managed forests - FLEGT processes - Woodlots	Monitor timber harvesting Monitor fuelwood use-quantity and source Partner with concessionaires to obtain data on timber removal, and combine with FA collected data on expected damage and estimated regrowth
Conservation Concessions	Set aside large tracts of forest for conservational purposes	Monitor with remote sensing imagery development encroachment and regulate accessibility to concessions
Integrating REDD+ into subnational land-use planning	- Implement REDD+ using nested approach - Integrate REDD+ into provincial and communal level land-use plans	Report national monitoring results of emissions/removals by subnational level and compare to reference scenario

Summary of Activities under Component 4A

An outline of the activities and steps that need to be accomplished to attain the objectives of Component 4A are presented in the outcome-chain (Figure 1). The proposed steps also can serve as the terms of reference that would need to be accomplished to meet the objectives of this Component.

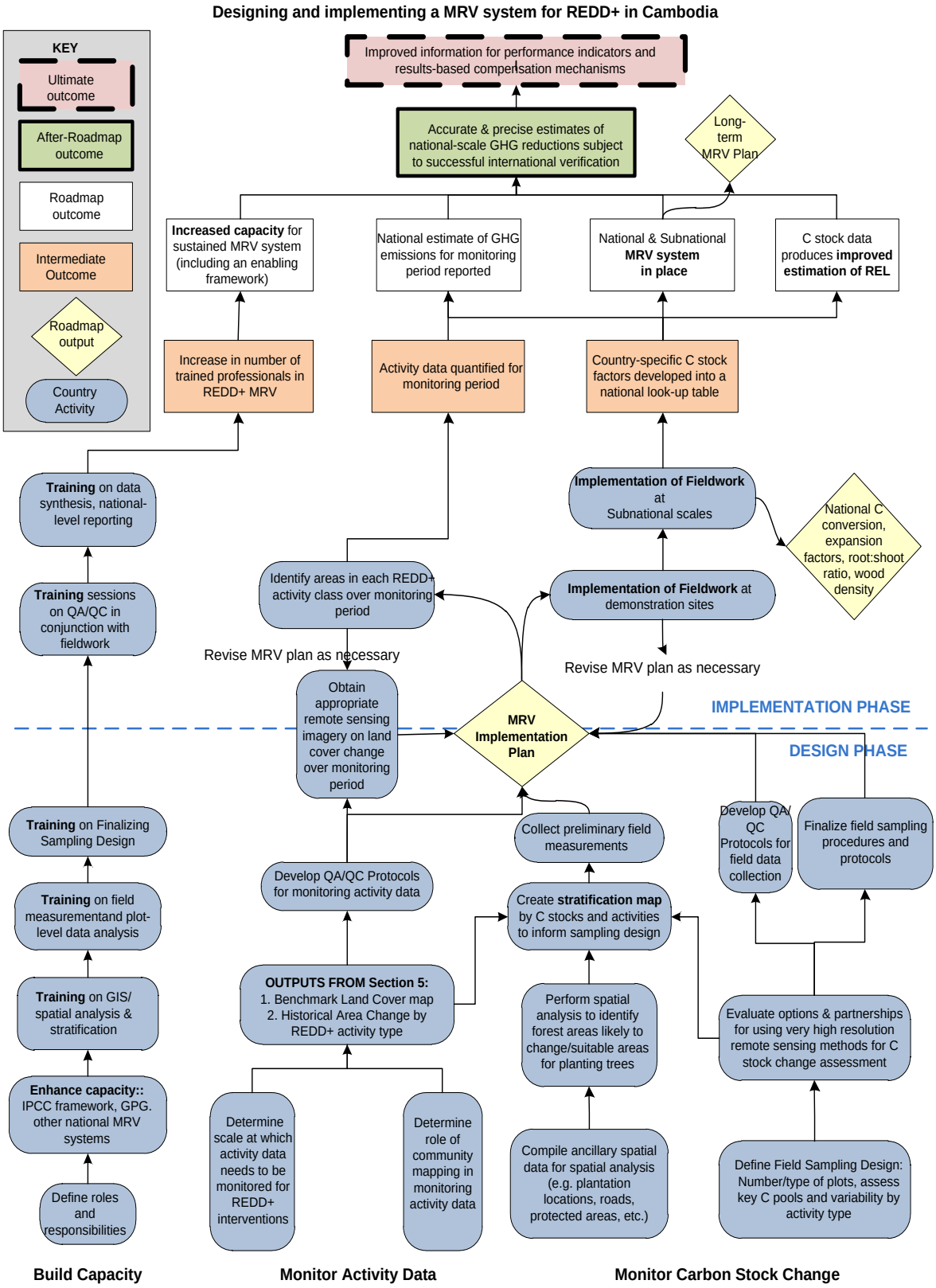


Figure 1 Outcome chain for designing and implementing a MRV system for REDD+ in Cambodia

Description of Activities

Activity 4A.1. Establish institutions for MRV/REL with adequate capacity.

In order to coordinate the development of the monitoring system the Cambodia REDD+ Taskforce will establish an MRV/REL Technical Team. This team will be responsible for coordinating the technical activities related to the design of the national forest monitoring system, although final decision-making will remain with the Taskforce. The team will be composed of key representatives from the main Government agencies responsible (FA, GDANCP, FiA, MLMUPC), other relevant institutions, external experts, and local communities. The management structure for the MRV/REL Technical Team will need to be developed and roles and responsibilities of various institutions defined to ensure that groups are working together towards a common goal. A training and capacity-building needs assessment will need to be undertaken for the MRV/REL Technical Team, technical staff in the FA/MAFF, GDANCP/MoE, FiA/MAFF and Department of Geography/MLMUPC who will be undertaking the analyses, field staff from local management units (e.g. Protected Areas and Protection Forests) and local communities. Based on the needs assessment targeted trainings should then be provided. A suitable office will need to be established to house the MRV/REL Technical Team. A full-time international MRV/REL advisor will be recruited to support the team in its work, and this advisor will be based in the Taskforce Secretariat.

Representatives of local communities and local management authorities (protected areas, forestry units, etc.) will need to play a key role in the MRV/REL Technical Team, because these stakeholders will be important for collecting information on both area changes and carbon stock changes that are not detectable using remote sensing imagery at the local scale. The MRV/REL Technical Team, especially FA/MAFF, MoE and FiA/MAFF representatives, will need to compile the data collected at the local level and across the communities. The identification of technologies commonly and widely used across the communities to improve compilation and storing of this data must be assessed.

Once roles and responsibilities are established by the REDD+ Taskforce, stakeholders engaged in monitoring efforts will be trained in relevant methods for monitoring land cover changes and carbon stock changes. Training will build on that gained during implementation of the steps to develop the REL and occur at multiple levels:

- REDD+ Taskforce and MRV/REL Technical Team: Engage with international experts to become more familiar with other national MRV systems already in place. Through this process, Cambodia will be able to apply lessons learned when developing and implementing an MRV system. Carbon stock measurement teams will be formed at subntational level and will be further trained (building on expertise attained during work on the REL Section) by experts in plot-level measurement and data analysis. FA, MoE and FiA as appropriate, should have high end capacity on RS/GIS in order to efficiently manage the MRV data achieve and registry.
- FA, MoE, FiA, Management Authorities for forested areas, and Department of Geography: Staff will receive training on GIS/spatial analysis relevant to monitoring REDD+ activities, including how to apply various land change models (e.g., GEOMOD, LCM, others) and how to develop a field sampling design within a GIS.
- Local communities (CFs, CFis, CPAs, indigenous communities): Will need training carbon stock measurement and monitoring methods, including field plot measurement techniques and collecting land cover data, especially for forests remaining as forests that are more difficult to monitor remotely.

Table 2 Overview of Cambodian government institutions that will receive training in MRV latest techniques

Agency	Responsible for implementing training	Type of training
Ministries	REDD+ Taskforce, MRV/REL Technical Team	- Overall implementation of REDD+ activities - RS/GS/Spatial modelling & stratification
FA	REDD+ Taskforce, MRV/REL Technical Team	- Overall implementation of REDD+ activities - RS/GS/Spatial modelling & stratification - Field sampling procedures and protocols

MoE	REDD+ Taskforce, MRV/REL Technical Team	- Overall implementation of REDD+ activities - RS/GS/Spatial modelling & stratification - Field sampling procedures and protocols
FiA	REDD+ Taskforce, MRV/REL Technical Team	- Overall implementation of REDD+ activities - RS/GS/Spatial modelling & stratification - Field sampling procedures and protocols
Department of Geography, MLMUPC	REDD+ Taskforce, MRV/REL Technical Team	- RS/GS/Spatial modelling & stratification
Local communities	REDD+ Taskforce, MRV/REL Technical Team	- RS/GS/Spatial modelling & stratification - Field sampling procedures and protocols

Activity 4A.2 Collation and harmonization of existing data

Cambodia already has considerable data on forest carbon stocks that could be used as part of the basis for the future design of the national forest inventory. This data will need to be collated and harmonized the existing data to identify key gaps and where further analysis or data collection is required. Since data are held by several Government agencies these activities will be coordinated by the MRV/REL Technical Team under the direction of the Taskforce.

Activity 4A.3 Develop the Cambodia Monitoring system plan for forest carbon

Under the direction of the Taskforce and with advisors and other technical experts, the MRV/REL Technical Team will develop a plan for the REDD+ monitoring system focusing on forest carbon. The monitoring system plan will be based on the principles established in this Section of the Roadmap. The design of the monitoring plan will need to consider the REDD+ strategies that are being implemented, and the appropriate scale to the REDD+ strategies. This will probably involve local communities and line agency subnational management units (e.g. protected areas) in the monitoring plan, as appropriate. The monitoring plan design should be based on appropriate standard operating procedures for measuring activity data (4A.4) and emissions and removals factors (4A.5), and include measures for checking data quality and accuracy. The design will need to take into account the nested approach and integrating subnational monitoring into the national system.

The MRV/REL Working Group should cooperate with the REDD+ Taskforce and key Ministries (especially MAFF and MoE) to set national definitions that will be used for REDD+. These definitions will include:

Step 4A.3a Set the National Forest Definition for the UNFCCC

The definition of forest decided by the Ministry of Agriculture, Forestry and Fisheries (MAFF) that Cambodia has submitted to the UNFCCC[91] is based on the following thresholds: minimum crown cover of 10%, minimum height of 5 m and minimum area of 0.5 ha[92]. However, the identification of forest in remote sensing imagery using lower than a 15% threshold for canopy cover is more difficult because as the threshold for forests is reduced, the accuracy of the remote sensing analysis declines. Under the CDM, the minimum crown cover chosen by Cambodia is 10% to allow all areas with less than that crown cover to potentially participate in CDM. Given that the current definition of forests in Cambodia is based on non-REDD+ programs and the technical issues related to using low canopy cover thresholds, Cambodia will revise its definition of forests to ensure the opportunities for implementing a REDD+ strategy maximizes the sustainable development of its forests while at the same time being able to respond to other reporting needs. Given that the 2002, 2006, and 2010 images were classified using a crown cover of 20%, and that changes to and from forests defined this way practically cover all the likely REDD+ strategies that will be implemented in Cambodia, it is recommended that the canopy cover threshold should be set at 20%, with the other two thresholds maintained the same. This change in canopy cover threshold is different than that registered with the UNFCCC under the CDM. As no CDM AR project is registered for Cambodia and

[91] Available at: http://cdm.unfccc.int/DNA/ARDNA.html?CID=37

[92] The definitions of forest and woodlands used by Cambodia are required by FAO for their reports. but as stated here the identification of forest in remote sensing imagery using lower than a 15% threshold for canopy cover is more difficult because as the cutoff gets lower, the accuracy of the remote sensing analysis declines.

that any AR activities can be captured under the "plus" of REDD+, there are no real implications of changing the forest definition for REDD+. However, any decision to revise the national forest definition will need to be widely consulted on in Cambodia and adopted by MAFF.

Step 4A.3b Decide forest classes to be used

The different land-use assessments have used varying definitions of Cambodia's forest types. A single classification system for REDD+ purposes will need to be developed, and classifications should then use this standard system. To facilitate reporting to the UNFCCC, the classification system will need to be consistent with the IPCC land-use categories. Historical datasets may need to be reclassified based on these revisions.

Step 4A.3c Define the reference time period

Although Cambodia has imagery collected in 1989, 1992/3, 1996/7, 2002 and 2005/6 and have produced land cover maps, the REL for Cambodia will be based on historic emissions from 1998 until 2010, because older imagery were collected using different techniques, have different scales and resolution, and therefore cannot be directly compared with recent imagery (see Component 3).

Step 4A.3d Decide the carbon pools to be measured

Cambodia proposes to include aboveground and belowground carbon stock in trees as the main pools in all land cover changes that are related to their REDD+ activities. The addition of supplemental pools can lead to increases in the cost of field measurements and monitoring. Therefore, the MRV/REL Working Group will need to assess which additional pools it wishes to include for the appropriate land cover changes. During this process, it may be appropriate to consider which carbon pools the pilot REDD+ projects are measuring, in order to ensure data consistency. These are:

- Oddar Meanchey: Aboveground biomass, belowground biomass and dead wood biomass
- Seima: Aboveground biomass, belowground biomass and dead wood biomass
- Southern Cardamoms: Aboveground biomass, belowground biomass, dead wood biomass and leaf litter biomass.

Other published studies for Cambodia have measured the following pools:

- Kim Phat et a. 2000 and Top et al. 2004[93]: Aboveground biomass (Kompong Thom province).
- Kiyono et al. 2010[94]: Aboveground biomass, belowground biomass, dead wood biomass and leaf litter biomass (12 plots, several provinces).

None of the pilot projects decided to measure soil carbon, and whether or not to include the social carbon pool for deforestation and forestation will require further investigation. As a first step, a summary of soil carbon data typical of forest soils in Cambodia will be compiled and assessed as well as compared to the global data sets that exist. This will enable the MRV/REL Technical Team to assess the cost and benefit of including soil carbon or not.

Tree removals and dead wood for charcoal production, over grazing of understory reducing regeneration, and fire all contribute to forest degradation. However, little data are available in Cambodia on how these degradation activities affect the carbon stocks in which pools. A first step during the REDD+ implementation phase will be to review the literature to determine if there are any studies on related topics in similar environments (including neighboring countries). In addition, field studies will be necessary to determine the effect these activities have on carbon stocks and to assist in determining which

[93] Kim-Phat N, Ouk S, Uozumi Y, Ueki T. 2000. Stand dynamics of dipterocarp trees in Cambodia's evergreen forest and management implications – a case study in Sandan district, Kamong Thom. J Jpn Forest Plann 6:13–23. Top, N., Nobuya Mizoue, and Shigetaka Kai, 2004, Estimating forest biomass increment based on permanent sample plots in relation to woodfuel consumption: a case study in Kampong Thom Province, Cambodia. Journal of Forestry Research, 9:117-123.

[94] Kiyono, Y., Furuya, N, Sum, T., Umemiya, C., Itoh, E., Araki, M. and Matsumoto, M. 2010. Carbon stock estimation by forest measurement contributing to sustainable forest management in Cambodia. Japan Agricultural Research Quarterly. 44 (1), 81 – 92. http://www.jircas.affrc.go.jp.

additional pools will need to be included. These studies would need to build on existing research reports[95].

In order to ensure that reports of decreases in emissions are not overstated as compared to the reference case, the principle of conservativeness will be used when deciding which pools to include in the REL as well as in the MRV, and except for the dominant tree pool, it allows certain pools to be omitted. However, it is clear that once established, the REL and subsequent MRV estimations must remain constant and include exactly the same pools.

Step 4A.3e Decide the stratification system to be used

The stratification system used for the MRV system will be based on the forest classes decided and the five REDD+ activities (deforestation, forest degradation, conservation, sustainable management of forests and enhancement of forest carbon stocks). A critical issue concerns how to detect forest degradation or enhancement of forest carbon stocks and how to stratify products appropriately. This may require further research into methods described in the GOFC-GOLD REDD Sourcebook, and will depend on future methodological guidance from the UNFCCC.

Activity 4A-4. Design and implement a national forest carbon monitoring system to quantify activity data for REDD+ related activities

Step 4A.4a. Determine scale at which activity data can be monitored using remote sensing imagery

Deforestation and afforestation/reforestation can be readily monitored with medium-resolution remote sensing data (e.g. Landsat, SPOT), but other REDD+ interventions that occur at smaller spatial scales or that do not result in a change in land cover (e.g. forest degradation, enhancement of forest carbon stocks) may be more difficult or even impossible to monitor remotely. High resolution satellite imagery and aerial photography are other options for monitoring small scale changes in land cover and forest condition. The Geography Department, the Forestry Administration and several Development Partners have significant amount of high resolution imagery data (Aerial photos, Ikonos, SPOT, etc) for various provinces of Cambodia. The possibility of using both, high resolution imagery and freely available RS data will be evaluated and a draft monitoring framework will be developed to identify gaps.

Step 4A.4b. Determine role of community mapping and local forest management units in monitoring activity data

For REDD+ interventions that cannot be monitored cost-effectively from satellite or other remote sensing imagery (e.g., monitoring trees outside forests), options will be investigated for incorporating mapping by communities and local forest management units (e.g. Protected Areas, Protected Forests) into the monitoring framework. For local mapping activities a sampling methodology, sampling design and QA/QC protocols will need to be developed during the design phase and incorporated into the final MRV Implementation Plan.

Step 4A.4c. Decide on scale for remote-sensing based area change based on cost-benefit analysis

Some area changes are easy to measure and result in large changes in carbon stocks (e.g., deforestation) while others involve much more intensive measurement and may not result in large emissions (or emission reductions). Prior to finalizing methods for monitoring land cover change at various scales, pilot areas will be monitored to evaluate the costs of monitoring small changes and a cost-benefit analysis (costs of monitoring vs. carbon benefits generated) will be conducted. Based on the analysis of these pilot projects, a detailed description on how to perform MRV in different scales will be formulated.

[95] Including: GERES, 2007. Wood energy in Cambodia – a brief overview; GERES, 2006. Wood energy baseline study for CDM; UNDP, 2008. Residential energy demand in rural Cambodia: An empirical study; GERES, 2009. WISDOM around Phnum Chumriey; Baskoro et al. , 2008 Biomass baseline information study using case studies to compare domestic and regional demand for rubber wood, rice husk and wood chips. GERES Cambodia; Suntra, H. 2009. Project for the Study on the Use and Supply of Timber/Wood in Cambodia. FA/TWGF&E.

Step 4A.4d. Develop QA/QC procedures for monitoring activity data, test draft MRV plan at demonstration sites and revise MRV plan as necessary

QA/QC procedures for monitoring area change will be developed including recommendations on expected standards and methodologies for mapping rates of land cover change, as will methods for addressing the use of different data sources through time for quantifying activity data. A description of all decisions made and methods developed in steps 4A.4a through d will be compiled into an initial MRV implementation plan. (This plan will also include descriptions on carbon stock changes, summarized in Activity 4A.5 below). The plan will be tested at demonstration sites and revised as necessary to ensure that the finalized MRV plan is functional and high quality.

During future monitoring periods, an assessment will be made during this step of opportunities for using the most up-to-date satellite-based or airborne-based methodologies for improved monitoring of performance of REDD+ activities at the national to regional scales and the MRV plan will be revised as necessary.

Step 4A.4e. Obtain appropriate data on area change over monitoring period

The MRV implementation plan, including collection of activity data and data on carbon stock changes, will be tested in demonstration sites and modified to adjust the plan as necessary to account for lessons learned. After this initial testing phase, appropriate data (including remote sensing data as well as other data collected by local communities as applicable) will be collected during each monitoring period.

Step 4A.4f. Divide activity data by each REDD+ activity class over monitoring period

Once activity data have been collected for the monitoring period, these data will be analyzed and broken down by the areas in each REDD+ activity class (deforestation, forest degradation, afforestation/reforestation, sustainable forest management, enhancement of forest carbon stocks) so that the area data can be combined with emission/removal factors developed in Activity 4A.5 below.

Activity 4A.5. Establish a national forest inventory system to quantify emissions and removal factors for REDD+ related activities.

The NFP prioritizes development of a National Forest Inventory (NFI), to include assessment of timber stocks. For REDD+, Cambodia therefore proposes to use a multi-purpose NFI that collects national statistics appropriate for timber inventories (e.g. by community forests or concessionaires), the necessary data to assess REDD+ emissions factors, and other needs such as data on watersheds. Support for implementation of the NFI system designed may be available through support to the NFP. Field measurements will be undertaken by the FA (for the Permanent Forest Estate), GDANCP (for Protected Areas) and FiA (for flooded forests and mangroves), and local communities or management units as appropriate.

Step 4A.5a. Develop QA/QC plan and protocols for forest carbon stock data collection

A data archiving framework and Quality Assurance/Quality Control (QA/QC) plan will be formulated so that field data on forest carbon stocks measured at various locations and for various attribute combinations will be transparently and accurately mapped and tracked.

National-level protocols for forest carbon inventories will need to be developed by the MRV/REL Technical Team following available reference and training resources (e.g., IPCC 2003 GPG LULUCF, World Bank's BioCarbon Sourcebook for LULUCF, GOFC-GOLD Sourcebook, etc.). These national-level protocols could be based on the Standard Operating Procedures already established for the different REDD+ pilot projects, especially in Oddar Meanchey, Seima Protection Forest and in the Southern Cardamoms. The protocols would need to be adapted include the multi-purpose objectives of the NFI, including sampling of timber stocks, for example. Different protocols may need to be developed for different forest areas: for example, in order to integrate with the requirements of community forestry management agreements. Additional design considerations will include the timing and frequency of different types of measurements (e.g., which measurements must occur up front vs. through time and which measurements must be collected once vs. once per monitoring period vs. once per year, etc.). The final set of standard field measurement protocols will be produced by the MRV/REL Technical Team.

It is likely that the carbon stocks of some forested types will be more variable than others. There is a relationship between the targeted accuracy/precision and the cost to sample that is related to the spatial variability of carbon stocks across the landscape—the more variable the carbon stocks and the higher the targeted precision the more costly it will be to measure in general. Therefore a cost to monitor versus a desired accuracy/precision will be investigated before the final protocols are developed.

Step 4A.5b. Stratification of land area to be monitored

It is proposed that not all lands need to be monitored as part of an MRV system for REDD+, because monitoring lands that do not undergo changes in land cover and/or changes in carbon stocks over the monitoring period – and therefore do not generate carbon benefits – would be resources poorly spent. Instead, it is proposed to stratify the land area to be monitored by potential REDD+ activity and potential change in carbon stocks.

Outputs from Component 3 (benchmark land cover map and historical area change by REDD+ activity type) will be needed to inform this stratification process. Combining historical area changes (deforestation, afforestation/reforestation, forest degradation, improved forest management, areas undergoing carbon stock enhancement) with other ancillary data that provide information about the likelihood of future changes will allow the identification of currently forested areas that are under threat of deforestation and forest degradation or that could undergo sustainable forest management or carbon stock enhancement, as well as the identification of currently non-forested areas that that are suitable for supporting tree cover. Such ancillary data could include, but are not limited to, biophysical data such as elevation, rainfall, slope, soil type, etc. as well as data related to how people use lands, such as locations of existing forest plantations, charcoal-producing regions, roads, protected areas, previously burned areas, forest communities, areas under agricultural production, etc. It is planned to use geospatial analysis and geospatial modelling to combine these data layers together to identify which areas within Cambodia are most suitable for each proposed REDD+ intervention. Monitoring intensity and type will strongly depend on the deforestation threat and type of REDD+ intervention.

Step 4A.5c. Develop national sampling plan for forest carbon inventories

A national sampling plan for forest carbon inventories will need to be developed by the MRV/REL Technical Team. It is proposed that a three-stage process is used to design the NFI sampling:

(i) Forest area pre-assessment and stratification, following the stratification system decided under 4A.5b.

(ii) Pre-sampling and examination of existing forest carbon stock data (from 4A.2), in order to determine the variance of the data collected and to obtain initial estimates of emission factors. This information is then used to determine the final sampling plan, based on the gaps where further data collection is required to meet accuracy and precision levels decided by the MRV/REL Technical Team. The protocols developed for step 4A.5a should be used.

(iii) Final sampling and assessment, based on the sampling plan. Data collection should focus only on lands that underwent change or are expected to undergo change in the future in order to minimise unnecessary data collection. These areas are:

- For forests, only the areas that underwent deforestation/degradation/disturbance are relevant;
- For soils, only the soils carbon stocks needed for areas converted to/from annual cultivation.

Results from the field measurements will be used to estimate emission factors for various land cover changes (deforestation, degradation, forestation, enhancement of carbon stocks) using the IPCC GPG framework, along with the estimated uncertainty around each emission factor.

This three stage approach consists of a learning-by-doing process but simultaneously resources and efforts can be better targeted if priorities evolve or resources are scarce. Different sampling designs can take advantage of pre-existing knowledge of the forest structure (and other information) to improve precision or reduce the cost of an inventory. During pre-sampling, preliminary statistics of different forest strata will be assessed. These preliminary statistics will be used to define the final sampling strategy but also to produce conservative estimates of emissions factors. The overall approach of the NFI's final sampling stage will be to use a combination of temporary and permanent plots. As for the pre-sampling stage, there will be an optimal allocation of plots combined with a cost-effective and statistically sound solution to sample in 'managed' unexploited forests and in 'unmanaged' (intact) forests.

The sampling plan and protocols will include details on stratification of the forest lands for measurement, estimation of sampling intensity (number of plots), plot size, and standard operating procedures for collecting measurements for each key carbon pool. Relevant FA, MoE and FiA staff (as appropriate) will be trained on these methods.

Select members of line agencies, Cambodian forest communities (CFs, CPAs, CFis, indigenous communities, etc.), local forest management units (Protected Areas, Protected Forests, etc.) and relevant private sector companies will be trained and engaged in future monitoring as appropriate. These stakeholders will be identified early on by the MRV/REL Technical Team in the MRV design process so that they will be engaged from the outset.

Step 4A.5d. Evaluate options and partnerships for using very high resolution remote sensing methods for carbon stock change assessment

High resolution remote sensing methods have emerged recently to map and monitor indicators of forest degradation such as logging roads, fire scars and other forest canopy damages, and secondary forest recovery. In addition, high resolution, airborne imagery has been used in combination with satellite imagery to estimate forest carbon stock changes over large areas[96]. The approach enables high resolution monitoring of forest cover and disturbance to estimate carbon emissions. This option for using state-of-the art methods for assessing carbon stock changes will be evaluated by the MRV/REL Technical Team when making final decisions on sampling design.

Step 4A.5e. Develop national values for key default parameters

Once carbon stock data have been collected, the data will be used to develop sub-national and/or national-level values such as carbon conversion factors, biomass expansion factors (if applicable), allometric equations for biomass estimation, root:shoot ratios, wood density, etc. These values will be compiled into one table so that calculations associated with monitoring will be able to be performed transparently, quickly and efficiently.

Step 4A.5f. Establish national database of emission/removal factors

Activity data for each REDD+ activity class (deforestation, forest degradation, afforestation and reforestation, sustainable forest management, enhancement of carbon stocks) must be paired with a corresponding emission or removal factor to calculate total emissions or removals. Therefore, the carbon stock data collected within each stratum will be compiled into a national database ("lookup table") of emission and removal factors (t CO_2/ha) by REDD+ activity class that can be used with activity data to quickly estimate emissions or removals across all REDD+ activity types.

Activity 4A.6. Report national estimate of GHG emissions during monitoring period and subject this estimate to international verification

Current Greenhouse Gas Inventory reporting is undertaken by the Department of Climate Change within GDANCP. Under this component, the lead Government agencies (FA, GDANCP and FiA) will be trained in reporting for REDD+, and systems will be established to allow such reporting to take place, including systems for Quality Assessment/Quality Control and measurement of uncertainty. It is important to assess the quality of measurements taken in the field, data compilation and data analysis in order to have error estimates and improve future measurements. The IPCC's Guidelines for National Greenhouse Gas Emissions (2006) already provide clarifications regarding quality control (QC) and quality assurance (QA).

The outcome of the monitoring system will be synthesized and compared against the reference level to provide timely reporting of emissions/removals for REDD+ activities. The MRV implementation plan will be developed to allow for complete transparency so as to be open for verification and peer review. The database developed under 4A.5 could be adapted to calculate changes in GHG emissions and removals to ease reporting.

[96] Asner, GP. 2009. Tropical forest carbon assessment: integrating satellite and airborne mapping approaches. *Environmental Research Letters* 4: 034009.

Annex 5: Schedule and Budget

Please present any additional details of your proposed Schedule and Budget.

Annex 6: Design a Program Monitoring and Evaluation Framework

Please present any additional details of your proposed Monitoring and Evaluation.

[end]