



# **Integrating Climate Change Issues into the National Forest Programme in Cambodia**

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# CONTENS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>3</b>
<b>2</b>	<b>COUNTRY BACKGROUND.....</b>	<b>3</b>
<b>3</b>	<b>FOREST SITUATION .....</b>	<b>4</b>
<b>4</b>	<b>IMPACTS OF CLIMATE CHANGE AND ADAPTATION OPTIONS .....</b>	<b>5</b>
4.1	Impact of Climate Change.....	5
4.2	Adaptation options .....	5
<b>5</b>	<b>MITIGATION ISSUES AND OPTIONS.....</b>	<b>6</b>
<b>6</b>	<b>ADAPTATION-MITIGATION SYNERGIES AND TRADE-OFFS .....</b>	<b>7</b>
<b>7</b>	<b>OVERALL POLICIES RELATED TO FORESTS AND CLIMATE CHANGE.....</b>	<b>7</b>
<b>8</b>	<b>INTEGRATING CLIMATE CHANGE ISSUES INTO FOREST POLICY, LEGAL AND INSTITUTIONAL FRAMEWORKS: ISSUES AND NEEDS .....</b>	<b>9</b>
8.1	Status of the National Forest Programme.....	9
8.2	Current initiatives on forests and climate change .....	10
	Forest Demarcation.....	10
	Community Forestry Development.....	11
	Forest Management.....	11
	Law Enforcement and Governance .....	12
8.3	Forests and climate change: policy issues and needs.....	12
8.4	Forests and climate change: legal frameworks and amendments.....	13
8.5	Forests and climate change: institutional arrangements, adjustment needs and options.....	13
<b>9</b>	<b>SUMMARY AND ISSUES FOR CONSIDERATION .....</b>	<b>14</b>
<b>10</b>	<b>ANNEX .....</b>	<b>16</b>
	<b>REFERENCES.....</b>	<b>17</b>

## ***Abbreviations***

CDRI	Cambodia Development Research Institute
CI	Conservation International Organization
CDM	Clean Development Mechanism
FA	Forestry Administration
FAO	Food and Agriculture Organization of the United States
ITTO	International Tropical Timber Agreement
LUCF	Land Use Change and Forestry
MAFF	Ministry of Agriculture, Forestry and Fisheries
MoE	Ministry of Environment
MoP	Ministry of Planning
NAPA	National Adaptation Programme of Action to Climate Change
NFP	National Forest Programme
NGO	Non Governmental Organization
NSDP	National Strategic Development Plan
REDD	Reduced Emission from Deforestation and Forest Degradation
RGC	Royal Government of Cambodia
SDP	Strategic Development Plan
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

## **1 Introduction**

The world's area of forests has been decreasing substantially; over the period 1990-2005 an average of 13 million hectares of forest was lost each year (FAO 2006). The loss of forest cover or forest lands in the world have contributed to climate change because deforestation and forest degradation are responsible for greenhouse gas emissions to the atmosphere. Emissions from deforestation and forest degradation in developing countries have contributed about 20 percent of emission of greenhouse gases annually around the world (IPCC 2007). Similarly, Cambodia has lost a considerable amount of its forest area. The National Forest Programme, which is developed by working groups, represents the strategic framework for sustainable forest management in the country. In order to make the Cambodian National Forest Programme effective and workable for forest and climate change sector, FAO and the Forestry Administration (FA), with the support of FAO, has initiated a process to better integrate climate change issues.

The objective of the present paper is to provide an overview about the forest situation, forest policies, and strategies to promote forest-based mitigation of and adaptation to climate change in Cambodia, with a view to integrating climate change issues into the Cambodian National Forest Programme.

## **2 Country Background**

Cambodia covers an area of 181,035 square kilometres with a total population estimated at 13.8 million people in 2005, projected at 15.27 million people in 2010 (NSDP 2006-2010, 2006). According to the 2008 Statistical Year Book, the population growth between 1998 and 2008 was nearly 2 million, which grew from 11.4 million in 1998 to 13.4 million in 2008. Its annual growth rate dropped to 1.54 percent at national level in 2008 (MoP, 2008; MoP, 2009). Today, half of the population is 21 years of age or younger. The percentage of population that lives in urban areas increased from 15.1 in 1998 to 19.5 in 2008, while the percentage of population living in rural areas dropped from over 84.1 in 1998 to 80.5 in 2008 (MoP, 2008). Sociological information on the causes of migration from rural areas to urban areas is not available, but it is safe to assume that rural livelihoods are deteriorating with population growth and deteriorating land resources.

According to the Statistical Year Book 2008, Cambodia is one of the poorest countries in the world with population living below the poverty line around 35 percent in 2004. But the figure decreased to around 30 percent in 2007. Of the total number of the poor, more than 91 percent live in rural areas, 8 percent in urban areas and 1 percent in Phnom Penh. Most people, especially rural poor and people living in re-

mote areas rely on natural forest resources for survival (Kim et al. 2006a). In 2007, there were 77.5 percent of employed persons in rural areas working in the agriculture sector focusing on crop production, livestock, farming and fishing activities. Cambodia is a small economy, with Gross Domestic Product (GDP) in 2005 of around US\$ 5.3 billion. The economic base is shifting away from agriculture, fisheries and forestry, with the sector accounting for around 31.4 percent of GDP (MoP, 2008).

Agricultural land use has expanded considerably during the last years, in line with the population growth (MoP, 2008). The increase in number of population and the development of the country's economy, which result in rapid change in land use patterns, land markets, rural migration, and disputes over land resources, are exerting pressure on natural resources, leading to deforestation and forest degradation. According to Suntra and Samreth (2008), population growth leads to increasing wood demand. They report that the trend of local wood demand is likely to increase from year to year, starting from 289,304 m<sup>3</sup> in 2009 to 358,939 m<sup>3</sup> in 2018 consistent with the projected population growth from over 14 million people in 2009 to over 17 million people in 2018. According to Statistical Yearbook 2005, it estimated that around 84% of the population rely on fuel wood and 5.5% on charcoal for cooking. This represents roughly a volume of 6,968,000 m<sup>3</sup> of fuel wood collected annually. Poverty and internal migration also have added pressure on natural resources to be at risk of destruction (Seng, 2009). According to the report "Cambodia Forest Cover", the most significant loss of forests occurred in the north-west of the country including Banteay Meanchey, Battambang, Siemreap, Oddar Meanchey and Pailin provinces (FA, 2008).

### **3 Forest Situation**

According to the Cambodia Forest Inventory, Cambodia's forest cover, estimated at over 13 million ha in 1965, has gradually decreased from 73.04% of the total land area in 1965 to 59.09% in 2006. This represents a total forest cover loss of 19.1% over 41 years or an annual average of roughly 0.5%. No reliable data are available on forest degradation. The bulk of deforestation occurred in recent years. The rate of forest loss was 1.1% per year during the 1990s, jumping to 2.0% in the period between 2000 and 2005 (FAO 2009). This alarming loss of forest cover is the result of demographic growth of around 1.7% annually and economic development of 10.8% annual GDP growth (data for 2006: FAO 2009; FA 2008; Kim et al. 2006b). Another cause of loss of forest cover is poverty, and internal migration (Seng, 2009). Deforestation and forest degradation caused by human activities have contributed to climate change. According to the Cambodian Greenhouse Gas Inventory for 2004,

land use change and forestry (LUCF) are the main source of greenhouse gases in Cambodia. They represented 79 percent of the total emission of greenhouse gases in Cambodia, followed by agriculture with 18 percent, and energy with 3 percent (MoE 2002).

## **4 Impacts of climate change and adaptation options**

### **4.1 Impact of Climate Change**

Similar to other countries in the region, Cambodia is vulnerable to the impact of climate change. The mean annual temperature is expected to increase by between 0.7° and 2.7° C until 2060, and between 1.4° and 4.3° until 2090 (McSweeney et al. 2008). The frequency of hot days and hot nights has increased by 13% and 17% since the 1960s. Projections for 2090 go up to a doubling of hot days and hot nights during summertime (ibid). According to the 2006 National Adaptation Programme of Action to Climate Change (NAPA), agriculture, forestry, human health and coastal zones are most vulnerable against the impacts of climate change. The provinces with highest vulnerability against flooding risks are Prey Veng; Takeo, Battambang, Kampong Cham, Banteay Meanchey and Kampong Thom show less vulnerability against floods. The remaining provinces show least vulnerability against floods. The provinces most impacted by climate change in terms of droughts are Battambang; Prey Veng and Banteay Meanchey, followed by Kampong Cham, Kampong Speu and other provinces (see Annex). Floods have accounted for 70 % of rice production losses between 1998 and 2002, while drought is responsible for 20% of the losses (MoE 2006). Floods do not only destroy crops, but also kill many people and damage infrastructures. Weather extremes believed to be related to climate change cause a significant number of fatalities and considerable economic losses. The costs of this damage were estimated at US\$150 million for 2000 (MoE, 2005).

### **4.2 Adaptation options**

According to Cambodia's Initial National Communication to UNFCCC (MoE 2002), there are three options that have been recommended to reduce the impact of climate change in forestry sector. Those include forest plantation establishment, conservation, and improvement of forest resource management. The forest plantation projects can be established in any climate change affected areas or areas vulnerable to impact of climate change in the country. Forest plantation location could be established in degraded forest areas or bare lands/ unproductive lands or any type

of lands that are suitable for tree planting in Kampong Thom, Kampot, Kratie, Sihanoukville, Takeo, Prey Veng, Battambang, Banteay Meanchey and other provinces that are vulnerable to climate change. Existing protected forest areas and protected areas, covering 4,624,971 hectares in over 10 different provinces in the country should be the first priority for forest conservation projects of climate change adaptation programme, if there areas are located in climate change affected areas. This would be recognised as approaches to adaptation to climate change in forest sector.

To address adverse effects of climate change, MoE developed a National Adaptation Programme of Action to Climate Change (NAPA) in 2006 with 39 projects for implementation in sectors of agriculture, water resource, coastal zone and human health that are vulnerable to climate change. Adaptation projects are classified into three categories: capacity building / training, awareness raising / education, and infrastructure development. The proposed projects include the construction of community water reservoirs, the development and improvement of community irrigation systems, the rehabilitation of coastal protection infrastructures, reforestation activities, the local production of bio-pesticides for mosquito control, and the wider distribution of mosquito nets and other initiatives that can reduce impact of climate change in Cambodia, and achieve Cambodia's goal of sustainable development. Reforestation implementation projects are proposed for provinces facing natural disaster such as Kampong Thom, Kampot, Kratie, Sihanoukville, Takeo, Prey Veng, Battambang, Banteay Meanchey, and cost around US\$ 4,000,000.

## **5 Mitigation issues and options**

Climate change mitigation options include avoiding forest degradation and destruction, forest conservation, reforestation/ tree planting activities, promotion of renewable energy such as using biogas (gas from animal manure) for cooking rather than fuelwood, campaigning on oil and energy saving, community forestry or conservation campaigns, (MoE 2009; Opening Speech of Cambodian Prime Minister in First National Forum on Climate Change 2009).

Under strong support of the Royal Government of Cambodia (RGC), two REDD activities were started in 2009 in Cambodia. The Forestry Administration adopted a new approach to reduce CO<sub>2</sub> emissions from forests through reducing deforestation and forest degradation (REDD). REDD projects are being implemented in two provinces with rich forests, under cooperation between the Forestry Administration and its partners. One is on community forestry area of Oddar Meanchey province and other one is on Seima Biodiversity Conservation area of Mondulkiri province.

The community forestry carbon credit project in Oddar Meanchey commenced in 2008 under agreement between the Forest Administration (FA) and community forestry groups. The avoided deforestation project lies on 12 community forestry areas of 600,477 hectares altogether. FA and its partners, Community Forestry International (CFI) and Terra Global Capital work together to develop the project design and documents for submission for validation along the standards of the Climate, Community and Biodiversity Alliance (CCBA) and the Voluntary Carbon Standard (VCS). Besides these, human resource development is raised in project implementation. A training course on REDD was provided to FA staff at provincial level. Another avoided deforestation project is under establishment in Mondulkiri with an area of 180,000 hectares. The Biodiversity Conservation carbon credit project in Mondulkiri province started in 2009 under cooperation between FA and WCS (Wildlife Conservation Society). Its main activities in the first stage are capacity building and data collection. The role of FA is to offer training courses to stakeholders and to analyse data quality (Kimsun 2009; FA-Terra Pact 2009).

Besides REDD, the CDM is used as a mechanism to support climate change mitigation efforts in developing countries. Afforestation and reforestation projects which sequester carbon are activities eligible for CDM projects. According to the report on Climate Change and Clean Development Mechanism 2009, five CDM projects were developed by the private sector with facilitation by the Cambodian Ministry of Environment. Three of five projects were registered. The approved projects are located in Kandal and Kampong Cham provinces and other two projects are in Kamport province. The projects focus on biomass, biogas, and hydroelectric.

## **6 Adaptation-mitigation synergies and trade-offs**

There is shortage of information relevant to synergies and tradeoffs between adaptation and mitigation options in the land use sector in Cambodia.

## **7 Overall policies related to forests and climate change**

According to MAFF's goal as well as to the National Strategic Development Plan for the period 2006 and 2010, the Cambodian government focuses on conservation forests and sustainable forest management. Under the plan, forest coverage is planned to attain 60% of total land in 2010 through increasing protected areas and encouraging private sectors and local community to participate in conservation and tree plantation. The RGC has determined to establish the forest biodiversity re-



source and wildlife protection area of 29 places covering a land area of 4.45 million hectares, which equals more than 25% of the total land mass (MAFF, SDP2006-2010, 2005, p12). Tree plantation by government agencies and private companies and individual household is another way to increase forest cover. RGC has planned to reduce household fuel wood consumption from 85.5% of total households in 2005 to 61% in 2010 (NSDP, 2006, p80).

**The Cambodian Millennium Development Goals (2003):** the aim of the Cambodian Millennium Development Goals is to increase forest cover to 60 percent of total land from 2005 to 2015 and to reduce the number of inhabitants dependent on fuel wood as their primary energy source from 92 percent to around 52 percent by 2015. The goals can contribute to reduced human pressure on forest resources and reducing emissions of greenhouse gas to the atmosphere.

**RGC's Rectangular Strategy for Growth, Employment, Equity and Efficiency Phase II (2008)** in side 4 of Rectangle 1 refers to forest reform. The aim of the plan is to manage forest in a sustainable manner and to promote protection forests through establishing protected and biodiversity conservation areas, reforestation, crackdown on illegal encroachments and occupation of forest land by private individuals. The policy also refers to encouraging the private sector to establish commercial forest plantation in degraded forest land and to improving local livelihoods by using forest resource in a sustainable way.

**National Forest Policy Statement 2002** promotes reforestation activities for the development of forest resources and reduction timber supply from natural forests through encouraging private investment and public participation.

The policy planning level is the Green Growth Roadmap, which is developed by an Inter-Ministerial Green Growth Working Group (IMGGW) of 17 Cambodian ministries, and which depicts the road to sustainable development of the Cambodian economy, including the sustainable use of its natural resources. Its starting point is the expected increase in climate variability and the need for the Cambodian economy to adapt to it. The currently available draft Roadmap foresees the creation of a Ministerial Green Growth Council with a holistic view to oversee the process. It explicitly mentions REDD as a source of funding and proposes the creation of country capacities and readiness in order to sustain Cambodia's participation in REDD. It further proposes the creation of a national system of payments for environmental services, and an internal emissions trading system for industrial emitters. It would certainly be helpful to intertwine the NFP with the Green Growth Roadmap once both are accepted and implemented. However, the drafting of the Green Growth Roadmap is not yet completed (as of December 2009).

## **8 Integrating climate change issues into forest policy, legal and institutional frameworks: issues and needs**

### **8.1 Status of the National Forest Programme**

Since 2006, the Technical Working Group on Forestry and Environment (TWG-F&E) initiated the development of the NFP in order to support the Cambodian government's goals of poverty reduction, sustainable forest management, and forest conservation. The purpose of the NFP is to establish a workable social and political framework for efficient management, conservation and sustainable development of Cambodia's forests, which will increase public and private interests and commitment to sector activities (NFP 2009).

The working group members, including civil society, NGOs, international organisations, development partners, and governmental agencies, were established to support the NFP development process. They work together to develop an NFP that can respond to demands of local, national, international requirements through providing a strategic, coherent, transparent framework to plan, manage, use, protect, and regenerate forest resources for the benefit of present and future generations. The NFP will provide strategic directions for the forestry sector in harmony with national development strategies and the Millennium Development Goals in Cambodia. After consultations on the draft NFP in meetings and workshops at national and provincial levels, drafts are now being updated. Updated drafts consist of the NFP: Background Document from October 2009 (FA 2009), the NFP Strategic Framework (FA 2009a), and the NFP National Framework Implementation Programme (FA 2009b), both dated December 2009. The NFP consists of six programmes, including

1. Forest Demarcation, Classification and Registration,
2. Forest Resource Management and Conservation,
3. Forest Law Enforcement and Governance,
4. Community Forestry, Capacity building,
5. Capacity and Research Development, and
6. Sustainable Forest Financing.

Even though six programmes of NFP do not address climate change in detail, the issue is repeatedly given mention, the NFP can be used for supporting a climate

change programme. According to the NFP Implementation Programme, some activities in the sub-programmes of each programme can contribute to mitigation climate change such as forest land demarcation (Programme 1), forest protection, forest conservation, tree plantation, identification tree species and provenance for climatic adaptation and multi-purpose forest plantations (Programme 2), law enforcement, the establishment working groups for certain purposes (Programme 3), participatory forest management, focusing on developing carbon credit projects in community forestry areas, poverty reduction through particular training courses providing, promoting the quality of the forest products and markets (Programme 4), forest extension and research for support NFP, providing training on Reducing Emission from Deforestation and Forest Degradation (REDD) to stakeholders involved (Programme 5), thus generating income from carbon credits under mechanisms pursuant to the UNFCCC (Programme 6). The National Forest Programme will be implemented in the near future (as of December 2009) after the NFP Strategy Framework is approved.

## **8.2 Current initiatives on forests and climate change**

In order to decrease LULUCF emissions, the Royal Government of Cambodia has been implementing policies and measures to slow down the process of deforestation and forest degradation such as establishing particular working groups (Technical Working Group on Forestry & Environment, National Committee for Suppressing Eliminating and Cracking Down the Forest Cutting, Burning, Clearing and Occupying Forest Estate), issuing legal documents (Forest Law, Subdecree on Community Forestry, Legislation on Establishment Clarification and Registration of Permanent Forest Estate) and changing its policy. The mechanisms used for reducing deforestation and forest degradation are forest demarcation, community forestry development, forest management, law enforcement and governance. The Government of Cambodia has been providing financial support to FA to run projects of forest demarcation, tree planting and law enforcement in many provinces. Besides MoE, FA and their partners, with the support of DANIDA, JICA, ITTO and other, work together to run projects of forest demarcation, law enforcement, community forestry and forest extension in provinces of Cambodia.

### **Forest Demarcation**

No or unclear boundary between forest land and agriculture land and other lands lead to illegal activities, land encroachment, land grabbing for ownership. All the activities contribute to loss of forest lands because forest lands are converted to other land use purposes, such as agriculture lands and residential land etc. To re-

duce the process of land encroachment and land grabbing, the land demarcation projects and land registration projects have been established under provision of the Subdecree 53 on Procedure for Establishment, Classification and Registration of the Permanent Forest Estate and 2002 Forest Law. Permanent forest estate demarcation and land registration processes are conducted across the country in cooperation arrangements between FA, development partners, and NGOs. According to data from Seng's report, 380 km of permanent forest estate have been demarcated. Similar to FA, MoE conducted land demarcation on its protected areas. The activity has the potential to reduce forest land encroachment, which leads to mitigation climate change.

## **Community Forestry Development**

Community forestry is recognised as a new tool to protect forests from illegal logging activities and land encroachment activities. Providing state forests to local communities can give dual benefits, environmental and economic, to local communities and government. The participatory natural resource management project has been implemented around the country under provision of Forest Law and Sub Degree of Community Forestry. According to data from Forestry Administration in 2009 there are 401 community forestry sites, covering total area of 380,587 hectares or over 2 % of total land. Under the RGC's forestry policy focused on sustainable forestry management and improving local livelihoods, Forestry Administration has projected to increase the community forestry area from 2% to 11% of total land. The participatory natural resource management approach does not only contribute to reduce CO<sub>2</sub> emission from deforestation and forest degradation to the atmosphere, but can also improve local livelihoods through increasing income generation from natural forest resources.

## **Forest Management**

Early 1990's forest management in Cambodia focused mainly on forest products (Kim et al. 2006), but after 2001 forest management in Cambodia turned its direction from forest products to forest conservation and reforestation. According to SDP 2006-2010, the 24 forest concession areas, covering 3,501,170 hectares were suspended from 1999 to 2005 (MAFF, 2005, p11) whereas, according to forestry statistics, the protected forest area increased from 19,877 hectares in 2000 to 1,490,500 hectares in 2006. There are 10 protected forest sites, covering 1,490,500 hectares in 12 different provinces of Cambodia and there are protected areas 23 sites, covering 3,134,471 hectares in 14 different provinces of Cambodia (FA, 2007, p7-8).

Reforestation is in support of the government's goal to increase forest cover to 60% of total country land in 2010. In response to government's goal, the FA has devel-

oped tree plantation and distributed tree seedlings to local communities and interested persons. According to data from the Reforestation Office of the Forestry Administration, there were tree plantation areas of 19, 251.14 hectares 2008. At the same time from 1986 to 2008 some 48, 577, 738 tree seedlings were distributed to local communities for tree planting in public places, and to households. The planned introduction new fuel-saving wood cookers can further release the human pressure on forests.

## **Law Enforcement and Governance**

Law enforcement and governance can be used as tool to reduce or eliminate illegal activities, which is a cause of deforestation and forest degradation. In response to these activities, the RGC issued legal documents and established working groups to crack down on illegal activities, illegal logging, and illegal land encroachment and land grabbing for ownership that happened in some places in Cambodia.

To overcome problems, projects concerning law enforcement have been developed under cooperation between government agencies and international organizations and NGOs. According to FA, FA and partnership, ITTO, CI, Wildlife Alliance, WWF, work together to eradicate illegal logging, illegal land encroachment, illegal trade of timber and wildlife through developing particular projects in some part of the country.

### **8.3 Forests and climate change: policy issues and needs**

The First National Forum on Climate Change during its opening session in October, 2009 in Cambodia revealed that Cambodia is willing to support the climate change agenda in terms of participation in mitigation through avoiding forest degradation and destruction, promotion of renewable energy, campaign on oil and energy saving, conservation of forest in national natural reserves and protected forest areas as well as encouraging private sector in use of renewable energy from agriculture wastes for their production, especially the use of bioenergy, rice husk and biogas for electricity production and cooking at rural areas. This could be recognized as a strategy for reducing emissions of greenhouse gases to the atmosphere and reducing adverse impacts of climate change through forest conservation. However the effort of either reducing greenhouse gas emission or adapting to climate change could not be success without transfer modern technology that do less harm to environment to the developing country, and financial support.

According to the National Forum the activities that need to be done immediately with regard to climate change in Cambodia are the following: prepare policy, strategy and action plan on climate change; streamline climate change into sectoral policy and plan; create climate change fund for projects of mitigation and adaptation to climate

change; strengthen institution and technical capacity, cooperation and coordination and research studies.

There are many governmental institutions that are involved in climate change as mentioned in sub decree No 174. Therefore, integrating climate change issues into their plans and policies are necessary for mitigation and adaptation to climate change. In 2009 the Ministry of Environment and the Forestry Administration have developed strategies for and projects of mitigation and adaptation to climate change even though a policy on climate change was not yet integrated into national programmes. However, it is expected that the next five-year national strategic development plan (2009 - 2013) will include some programmes that support to climate change sector.

#### **8.4 Forests and climate change: legal frameworks and amendments**

Recently, the RGC revised subdecree number 35 on the establishment of the National Committee for the Management of Climate Change (chaired by the Cambodian Prime Minister). The updated subdegree, subdecree number 174, was approved in October, 2009. The National Committee focuses firstly on mainstreaming climate change into relevant sectors especially agriculture, water resources, forestry, industry and energy and health ensuring the sustainable agricultural development, the sustainable development of water resources and land, development of tourism sector, the people's health care and other sectors.

#### **8.5 Forests and climate change: institutional arrangements, adjustment needs and options**

A plethora of ministries and agencies is responsible for forest land use. These are most prominently the Ministry of Agriculture, Forestry & Fishery (Forestry Administration) that is responsible for the permanent forest reserves, and the Ministry of Environment that is in charge of the protected areas, including National park, wildlife sanctuaries, protected landscape and multiple use area, which are not included in the permanent forest reserves. So it is assumed that both ministries play the main role in mitigation and adaptation to climate change through REDD and CDM approaches.

At the national policy level, the RGC established the National Committee for the Management of Climate Change (NCCC) by Subdecree No 174 in October, 2009.

NCCC is an inter-agency body, which has member from 19 different governmental institutions, including Ministry Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Industry, Mines and Energy, Ministry of Water Resources and Meteorology, Ministry of Commerce, the Council of Ministers, Ministry of Interior, Ministry of Economy and Finance, Ministry Public Works and Transport, Ministry of Planning, Ministry of Foreign Affairs and International Cooperation, Ministry of Education, Youth and Sports, Ministry of Health, Ministry of Land Management, Urban Planning and Construction, Ministry of Rural Development, Ministry of Information, National Committee for Disaster Management, Council for the Development of Cambodia, Cambodian National Mekong Committee. Functions of national committee are: prepare, coordinate and monitor the implementation of policies, strategies, legal instruments, plans and programmes of the Cambodia government to address climate change issues.

The MoE is nominated as the focal point for the UNFCCC as a whole for the Clean Development Mechanism, the Convention on Biological Diversity (CBD) and for the Ramsar Convention on Wetlands. The MAFF, on the other hand, is nominated as the focal point for REDD under the UNFCCC, the Convention to Combat Desertification (UNCCD), and the UN Forum on Forests.

In response to the Subdecree No188 on Forestry Administration Promotion Equivalence of the General Department dated in November 2008, the Forestry Administration adjusted its structure of organization to establishment a new office responsible for REDD.

## **9 Summary and issues for consideration**

Forest cover in Cambodia has decreased gradually from over 70 percent in 1965 to 59 percent in 2006. The main causes of the loss of forest cover are population growth, economic development, poverty and migration. The most significant forests loss occurred in the north-west of the country including Banteay Meanchey, Battambang, Siemreap, Oddar Meanchey and Pailin provinces. The loss of forest cover is Cambodia's major contribution to climate change. To deal with the problems, the RGC is undertaking a range of policies and measures. These address avoiding forest degradation and destruction, forest conservation, reforestation, promotion of renewable energy, campaigning on oil and energy saving, community forestry or conservation campaigns. Working groups on climate change and a Technical Working Group on Forestry&Environment are approaches to address mitigation and adaptation to climate change. However the effort of either reducing greenhouse gas

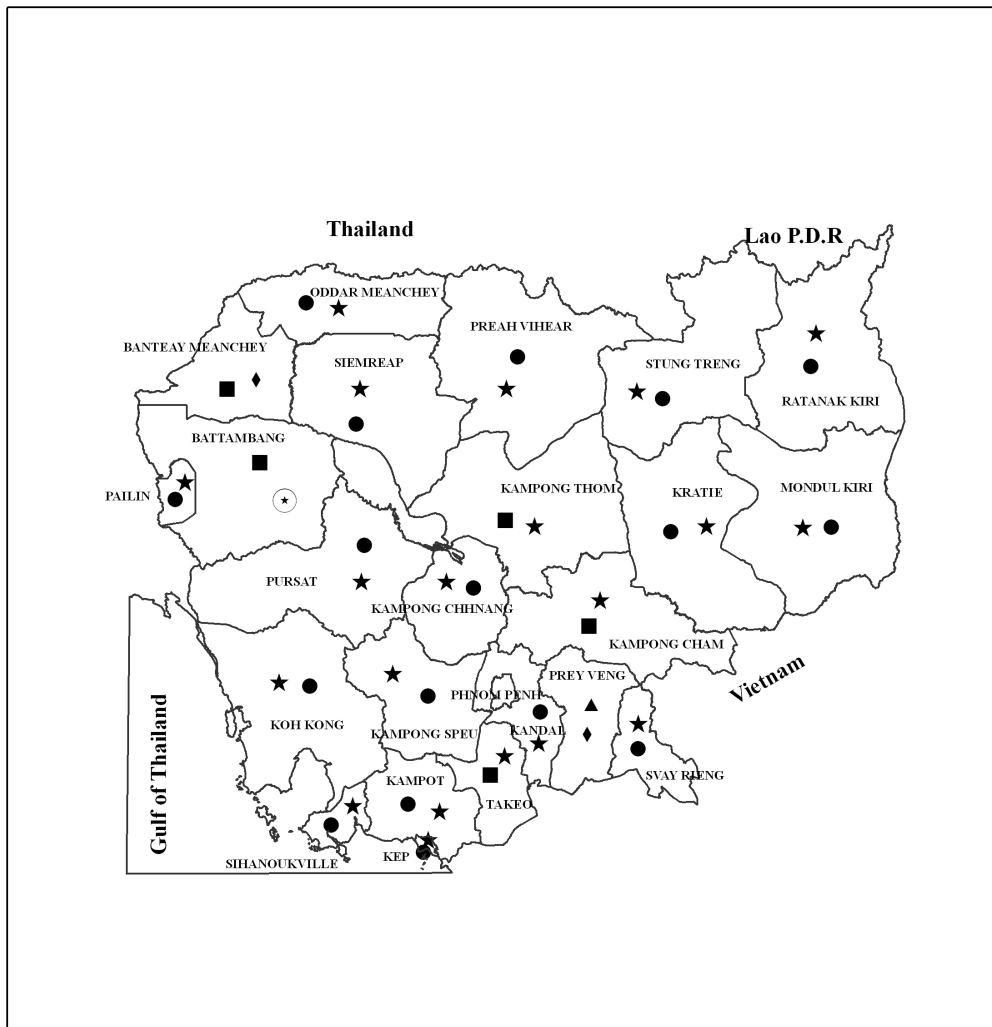
emissions or adapting to climate change will not be successful without technical support and financial support to Cambodia.

The National Forest Programme (NFP) was developed to support the Cambodian government's goal of poverty reduction, sustainable forest management, and forest conservation. The NFP includes six programme areas, which do not in all cases make detailed reference to climate change. Especially they do not explicitly refer to strategies for REDD implementation, REDD regulations setting, degraded forest land use planning, and approaches to mitigation and adaptation to climate change. These are gaps in NFP framework. Nevertheless, the NFP supports climate change mitigation and adaptation activities, because some activities in sub programmes of the NFP programme support avoiding deforestation, forest degradation and reforestation. The NFP is not yet under implementation. There are good chances that in this phase, pertinent references to climate change within the NFP framework can still be introduced.



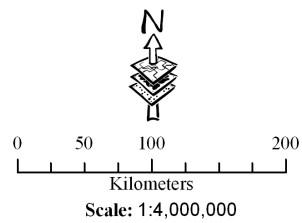
# 10 Annex

MAP OF VULNERABILITY TO CLIMATE CHANGE



**Legend**

- ~ Province Boundary
- Level of Vulnerability to Floods by Provinces**
- Quite vulnerable
- Vulnerable
- ▲ Very vulnerable
- Level of Vulnerability to Droughts by Provinces**
- ★ Quite vulnerable
- ◆ Vulnerable
- ☆ Very vulnerable



## References

- FA, 2007, Cambodia Forestry Statistics 2006, Forest Administration, Phnom Penh
- FA, 2008, *Cambodia Forest Cover 2006*, DANIDA/DFID and New Zealand, Forest Administration, Phnom Penh.
- FA, 2009, *Cambodia's National Forest Programme: NFP Background document*, Forest Administration, Phnom Penh.
- FA, 2009a, *Cambodia's National Forest Programme: Strategic Framework*, Forest Administration, Phnom Penh.
- FA, 2009b, *Cambodia's National Forest Programme: National Framework Implementation programmes*, Forest Administration, Phnom Penh.
- FAO, 2006, *Global Forest Resources Assessment 2005*, FAO Rome.
- FAO 2009, *State of the World's Forests*, Rome
- IPCC 2007, *Climate Change 2007. Fourth Assessment Report*, UN International Panel on Climate Change, Geneva, Switzerland
- Kim Sreng Heov, Bottra Khlok, kasper Hansen, Christian Sloth, 2006, *Forest Management Options in Cambodia*, issue 4, CDRI, available at <http://www.cdri.org.kh>
- Kim Sreng Heov, Bottra Khlok, kasper Hansen, Christian Sloth, 2006a, *The Value of Forest Resource to Rural Livelihoods in Cambodia*, Issue 2, CDRI, available at <http://www.cdri.org.kh>
- Kim Sreng Heov, Bottra Khlok, kasper Hansen, Christian Sloth, 2006b, *Trends and Dynamics of Deforestation and Forest Degradation*, Issue 1, CDRI, available at <http://www.cdri.org.kh>
- MAFF, 2005, *Agricultural Sector Strategic Development Plan for 2006-2010*, Ministry of Agriculture, Forestry and Fishery, Phnom Penh..
- McSweeney, C.; M. New and G. Lizcano 2008. UNDP Climate Change Country Profiles Cambodia, UNDP, Oxford, <http://country-profiles.geog.ox.ac.uk>
- MoE, 2002, *Cambodia's Initial National Communication*, Ministry of Environment, Phnom Penh
- MoE, 2005, *Analysis of Policies to Address Climate Change Impacts in*

- Cambodia*, Ministry of the Environment, Phnom Penh.
- MoE, 2006, National Adaptation Programme of Action to Climate Change (NAPA), Ministry of the Environment, Phnom Penh
  - MoE, 2009, *Climate Change and the Clean Development Mechanism* , 5<sup>th</sup> edition, Ministry of the Environment, Phnom Penh
  - MoP, 2005, *Statistical Year Book of Cambodia 2005*, Ministry of Planning, Phnom Penh.
  - MoP, 2006, *National Strategic Development Plan for 2006 – 2010*, Ministry of Planning, Phnom Penh.
  - MoP, 2008, *Statistical Year Book of Cambodia 2008*, Ministry of Planning, Phnom Penh..
  - MoP, 2009, *General Population Census of Cambodia*, Ministry of Planning, Phnom Penh.
  - Seng Vang, 2009, *Policy Analysis for Agricultural Land Use*, Ministry of Agriculture, Forestry and Fisheries, Phnom Penh.
  - Suntra Hang, Samreth Vanna, 2008, *Study on National and Provincial Timber Supply and Demand in Cambodia*, Forestry Administration, Phnom Penh.
  - Tin Ponlok, Rizaldi Boer, Noelle O'Brien, 2001, *National Greenhouse Gas Inventory for 1994*, Ministry of Environment, Phnom Penh.
  - Arild, 2008, *Moving Ahead with REED*, CIFOR, Indonesia.
  - FA, Terra, Pact, 2009 *Paper on Cambodia Signs Avoided Deforestation Carbon Agreements for Voluntary Carbon Standard Project*, available at <http://www.pactworld.org/>
  - Kimsun Chheng, 2009, *Presentation, on Cambodia Experience toward REDD Readiness and Country initiatives*, in the 10<sup>th</sup> Seminar on Current International Issues Affecting Forestry and Forestry Product in MYANMAR,
  - Rectangular Strategy for Growth, Employment, Equity and Efficiency phase II, 2008 of the Royal Government of Cambodia.
  - The Cambodian Millennium Development Goals 2003
  - National Forest Policy Statement 2002
  - Subdecree No 53 on Procedure for Establishment, Classification and Registration of the Permanent Forest Estate 2005
  - Subdecree No 79 on Community Forest 2003
  - Subdecree No 35 on the Establishment of the National Climate Change Committee, 2006
  - Subdecree No 174 on the Establishment of the National Climate Change

Committee, 2009

- Subdecree No 188 on the Forestry Administration Promotion Equivalence the General Department, 2008
- Forest Law 2002
- Speech of Cambodian Prime Minister during opening session at the First National Forum on Climate Change in October 2009, Phnom Penh.
- The draft on The National Green Growth Roadmap, 2009, Ministry of Environment, Phnom Penh.
- Nominated FA as Seller of the Forest Carbon in Cambodia with CFI, Council of Ministers decision 699 dated in 2008.
- Paper on *Summary of Forest Plantation from 1985 to 2008* of Reforestation Office of FA in 2008.
- Paper on *Seedling Distributed for Tree Planting Activities by People from 1986 from 2008* of Reforestation Office of FA in 2008.