RECOFTC
THE CENTER FOR PEOPLE AND FORESTS

The Role of Social Forestry in Climate Change Mitigation and Adaptation in the ASEAN Region

Assessment 2010

ASFN

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Disclaimer:

The views expressed in this report are those of the author and do not necessarily represent the views of RECOFTC, SDC or the ASFN.

The Role of Social Forestry in Climate Change Mitigation and Adaptation in the ASEAN Region

ISBN: 978-616-90183-5-3

All photos courtesy of RECOFTC

RECOFTC – The Center for People and Forests
P.O. Box 1111
Kasetsart Post Office
Bangkok, 10903, Thailand
info@recoftc.org

ASEAN Social Forestry Network Secretariat
Directorate of Social Forestry Development
Directorate General of Watershed Management and Social Forestry
Ministry of Forestry of the Republic of Indonesia
Manggala Wanabakti Block VII, 4th Floor
Jalan Gatot Subroto, Jakarta 10270, Indonesia
info@asfnsec.org, asfn.secretariat@asfnsec.org

Swiss Agency for Development and Cooperation (SDC)
Federal Department of Foreign Affairs FDFA
Global Programme for Climate Change GPCC
Freiburgstrasse 130
3003 Berne, Switzerland
info@deza.admin.ch

Printed on 50% recycled paper

Foreword

The establishment of the ASEAN Social Forestry Network (ASFN) was endorsed by the ASEAN Senior Officials on Forestry (ASOF) during their eighth meeting in August 2005 in Phnom Penh. Its main goals are to strengthen ASEAN cooperation in social forestry and to promote good policy and practices by sharing knowledge and experiences among communities, local governments, civil society organizations, and the private sector.

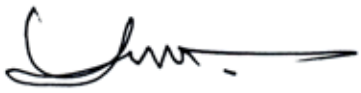
The ASFN recognizes the important role that people living in and around forests play in forest management for poverty reduction and environmental sustainability. This role enables them to address various social and environmental challenges facing their communities, their countries, and the region. As the first government-driven social forestry network in Southeast Asia, the ASFN is uniquely positioned to link government forestry policy-makers with stakeholders from civil society organizations, research institutions, academia, the private sector, and related fields who share ASEAN's social forestry development vision and its potential to address issues presented by climate change. Under the auspices of ASEAN, the ASFN can inform the ASOF policy agenda and build synergies with the ASEAN Regional Knowledge Network on Forests and Climate Change, which focuses on REDD+ and afforestation/reforestation Clean Development Mechanism (CDM) approaches.

As part of its collaboration with the ASFN, RECOFTC – The Center for People and Forests provides analytical support on the readiness of ASEAN Member States to implement social forestry programs, particularly those that underpin climate change mitigation and adaptation schemes. This synthesis can feed into the decision-making processes of the ASFN and the ASOF, as well as into other climate change programs that are currently taking place in ASEAN countries, e.g. the UN-REDD Programme, the Forest Carbon Partnership Facility (FCPF), the Forest Investment Program (FIP), and other bilateral and multilateral cooperations.

The study was prepared by Claudine Nagiah from *theIDLgroup*, and Yurdi Yasmi from RECOFTC provided guidance and overall supervision of the study. The funding for this study was provided by the Swiss Agency for Development and Cooperation's (SDC) Global Program on Climate Change.

The report has benefited from the inputs of experts from ASEAN countries and from RECOFTC. The author would like to thank James Bampton, Maria Cristina Guerrero, Lua Hock Keong Khamphay Manivong, Khamseneas Ounkham, Oupakone Alounsavath, Saysamone Phothisat, Ohn Lwin, Edwin Payuan, Nguyen Quang Tan, Truong Tat Do, Pei Sin Tong, Somying Soontornwong, Rowena Soriaga, Maung Maung Than, Tint Lwin Thaung, Tachrir Fathoni, Haryadi Himawan, M. Ali Wafa Pujiono, Niniek Irawati, Erna Rosdiana, Nikolas Nugroho S., Catur Endah PP, Danang Kuncara Sakti, Agnes Tuanakota, Ronnakorn Triraganon, and Celina Yong for their inputs into the country sections. Particular thanks go to Sagita Arhidani and the ASFN Secretariat for coordinating comments from ASEAN Member States. Support from ASEAN Member States particularly the ASFN Leaders and National Focal Points, ASOF Leaders, and the ministries and line agencies with forestry mandates was tremendous and vital to the report.

The author is especially grateful to the UN-REDD Programme's Tim Boyle and RECOFTC's Ben Vickers and Yurdi Yasmi for providing guidance and feedback. Toral Patel, Alison Rohrs, Apinita Siripatt, and Robin Leslie prepared the report for publication.



Yam Malla, Ph.D.
Executive Director
RECOFTC – The Center for People and Forests

Juergen Blaser, Ph.D.
SDC Global Program
Climate Change

Table of Contents

Acronyms and Abbreviations

ADB	Asian Development Bank
A/R	Afforestation and Reforestation projects under the CDM
ASEAN	Association of Southeast Asian Nations
ASFN	ASEAN Social Forestry Network
ASOF	ASEAN Senior Officials on Forestry
BAU	Business as Usual
CADC	Certificate of Ancestral Domain Claim
CBFM	Community-based Forest Management
CBMFA	Community-based Forest Management Agreement
CBNRM	Community-based Natural Resource Management
CDM	Clean Development Mechanism
CIFOR	Center for International Forestry Research
CLiPAD	Climate Protection through Avoided Deforestation
CFM	Community Forestry Management
COP	Conference of Parties (to the UNFCCC)
CPA	Community Protected Area
DA	Demonstration Activity
DAFO	District Agriculture and Forest Office (Lao PDR)
Danida	Danish International Development Agency
DENR	Department of Environment and Natural Resources (Philippines)
DFID	Department for International Development (UK)
DMC	Department of Marine and Coastal Resources (Thailand)
DoF	Department of Forestry (Lao PDR)
DoF	Directorate of Forestry (Vietnam)
DOFI	Department of Forest Inspection (Lao PDR)
ELC	Economic Land Concession
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FFI	Fauna and Flora International
FINNIDA	Finnish International Development Agency
FIP	Forest Investment Program
FPIC	Free, Prior, and Informed Consent
FLEG-T	Forest Law Enforcement, Governance, and Trade
FMB	Forest Management Board (Philippines)
FOMACOP	Forest Management and Conservation Project (Lao PDR)
FSC	Forest Stewardship Council
HFA	Hyogo Framework for Action
GDP	Gross Domestic Product

GHG	Greenhouse Gas
GIZ	German Agency for International Cooperation
IFCI	International Forest Carbon Initiative
IFAD	International Fund for Agricultural Development
IMCCC	Inter-Ministerial Committee on Climate Change (Singapore)
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
JICA	Japan International Cooperation Agency
KFCP	Kalimantan Forest and Climate Partnership
LDC	Least Developed Country
LULUCF	Land Use, Land Use Change and Forestry
MAF	Ministry of Agriculture and Forestry (Lao PDR)
MAFF	Ministry of Agriculture, Forestry and Fisheries (Cambodia)
MAPDRR	Myanmar Action Plan on Disaster Risk Reduction
MARD	Ministry of Agriculture and Rural Development (Vietnam)
mha	Million hectares
MoE	Ministry of Environment (Cambodia)
MONRE	Ministry of Natural Resources and Environment (Thailand)
MoNRE	Ministry of Natural Resources and Environment (Vietnam)
MRV	Monitoring, Reporting and Verification
MTC	Malaysian Timber Council
Mt(C)	Mega tonnes (of carbon) i.e. 1,000,000 tonnes
NAMA	Nationally Appropriate Mitigation Actions
NAPA	National Adaptation Programs of Action
NCCS	National Climate Change Secretariat (Singapore)
NCEA	National Commission for Environmental Affairs
NDPCC	National Disaster Preparedness Central Committee (Myanmar)
NFP	National Forest Program (Cambodia)
NICFI	Norway's International Climate and Forest Initiative
NCR	Native Customary Rights
NFC	National Forest Council (Malaysia)
NGO	Non-governmental organization
NTP	National Target Program (Vietnam)
ONEP	Office of Natural Resources and Environmental Planning (Thailand)
PAFO	Provincial Agriculture and Forest Office (Lao PDR)
PES	Payments for Ecosystem Services
PFE	Permanent Forest Estate
PO	People's Organization
PNRPS	Philippines National REDD+ Preparedness Strategy
RANPI	National Action Plan Addressing Climate Change (Indonesia)
RECOFTC	The Center for People and Forests
REDD	Reduced Emissions from Deforestation and Forest Degradation
REDD+	Reduced Emissions from Deforestation and Forest Degradation plus sustainable management of forests, conservation and enhancement of forest carbon stocks

RFD	Royal Forest Department (Thailand)
R-PIN	REDD+ Readiness Plan Idea Note (for FCPF)
R-PLAN	REDD+ Readiness Plan (for FCPF)
R-PP	REDD+ Readiness Preparation Proposal (for FCPF)
RSPO	Roundtable for Sustainable Palm Oil
RUPES	Rewarding Upland Poor for Environmental Services
SDC	Swiss Agency for Development and Cooperation
SECO	Swiss Secretariat for Economic Affairs
SIDA	Swedish International Development Cooperation Agency
SFM	Sustainable Forest Management
SUF	Special-use Forests
SUFORD	Sustainable Forestry and Rural Development
TAO	Tambon Authority Organization (Thailand)
tCO2/ha	Ton of carbon dioxide per hectare
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WCS	World Conservation Society
WREA	Water Resources and Environmental Administration (Lao PDR)

Executive Summary

This report provides a general overview of social forestry in the Association of Southeast Asian Nations (ASEAN) region and its potential to contribute to climate change mitigation and adaptation. The report focuses on Cambodia, Indonesia, Lao PDR, Malaysia (particularly the States of Sarawak and Sabah), Myanmar, the Philippines, Thailand, and Vietnam.

ASEAN countries are highly vulnerable to the impacts of climate change. The region's long coastlines, low-lying coastal areas, and large river delta systems are at risk from frequent and severe storms, sea-level rise, and flooding. Unpredictable rainfall patterns, droughts, and floods may negatively affect agricultural productivity and food security. The impacts of climate change will be felt most strongly in the least developed countries that have limited capacity to cope and adapt.

Forests store large amounts of carbon that are released into the atmosphere by deforestation or degradation. An estimated one-fifth of global CO_2 emissions comes from the forestry sector. In this respect, Cambodia's forestry sector is responsible for 97% of national CO_2 emissions. Indonesia is considered to be one of the biggest contributors to global CO_2 emissions, with most of its emissions produced by Land Use, Land Use Change and Forestry (LULUCF).

Climate change mitigation and adaptation strategies nonetheless rely on forests. Managing forests sustainably and enhancing the extent and condition of forest cover can increase carbon sequestration. This fundamental principle underlies international mitigation mechanisms. Forest resources furthermore support climate change adaptation by helping to diversify livelihoods, thereby buffering rural peoples' vulnerability to natural disasters. Accordingly, forest management will be integral to addressing climate change.

REDD+ is an effort to valuate forest carbon and generate financial incentives for forest protection. As well as reducing emissions from deforestation and forest degradation, it promotes sustainable forest management (SFM) as well as the conservation and enhancement of forest carbon. As such, REDD+ has the potential to increase recognition of customary land rights, encourage participation of local people in forest management, and provide financial resources for continued development and poverty reduction. Conversely, it has just as much potential to further exclude rural and indigenous people from forest resources. Governments and private companies may restrict forest access and resource use in order to secure the potentially high volume of financial flows from REDD+ for their own benefit.

A range of REDD+ pilot projects is already in place throughout ASEAN countries. These projects contribute to the growing body of experience and knowledge on the systems and structures needed to reduce deforestation and forest degradation while engaging local communities. However, the international community of policy-makers and practitioners has yet to address the many challenges that REDD+ development and implementation present.

REDD+ countries will need comprehensive legal and policy frameworks to govern national and local forest management. Existing laws and policies may require updating or amending to determine how REDD+ strategies are managed, implemented, and monitored; to recognize customary rights; and to delineate how the potential benefits will be shared.

Awareness and understanding of REDD+ among local people must also be enhanced. Free, Prior, and Informed Consent (FPIC) of forest-dependent people will help to foster their participation, which in turn, will be critical in enabling them to claim an equitable share in potential REDD+ benefits.

Future financial rewards from REDD+ will need to be made available to forest-dependent communities to reward them for forest protection and compensate them for lost revenues. To this end, the development of robust mechanisms for benefit-sharing is crucial. Profitable land-use strategies – such as timber production, industrial agriculture, palm oil production or mining – are powerful economic drivers of deforestation and can act as powerful disincentives to forest protection.

SFM aims to balance forests' economic, environmental, and social functions and ensure their continued benefits. Social forestry, which emphasizes the role of local people in forest management, is a key strategy for SFM in many ASEAN countries. It presents an opportunity to link SFM, forest protection, biodiversity conservation, and improved livelihoods, as well as climate change mitigation strategies like REDD+.

The current status of social forestry across the ASEAN region varies from country to country. In some places, it is established with large areas of forestland officially managed by local people. In other places, existing national policies and legal frameworks for local forest management remain weak. Still others have established the necessary laws and policies, but lack institutional capacity for effective implementation. The varying conditions suggest that REDD+ may meet similarly varying degrees of success across the region.

The potential role of the ASEAN Social Forestry Network (ASFN): Many ASEAN countries are moving forward with REDD+ in pilot projects. These projects are generating a growing body of knowledge and experience on the implementation of REDD+, the role of social forestry, and the engagement of local people. The ASFN could help to disseminate this information in order to support the development of effective policy and institutional capacity. Regional activities may include producing communications materials on social forestry best practices in ASEAN local languages; facilitating regional learning and sharing events; and conducting study visits to pilot project sites in other countries.

Such exchange of information will also help to coordinate regional action on climate change adaptation. Because forests and climate change transcend government sectors and administrative boundaries, local and national agencies must synchronize their policies, strategies, and actions. The ASFN could act as a regional body for coordinating relevant policies and programs across and within ASEAN countries.

The ASFN could also support capacity building of government institutions and stakeholders at all levels to effectively design, develop, implement, and monitor REDD+ projects. This might consist of a series of training events and workshops that provide a platform for the dynamic exchange of knowledge and experience.

Finally, the role of social forestry in climate change adaptation has received little attention. It will be an important area for future research, which the ASFN may be able to support.

Section 1

Background and Key Concepts

Section 1 Background and Key Concepts

Introduction

This report aims to provide a general overview of social forestry[1] in ASEAN countries[2] and their readiness to implement social forestry in support of climate change mitigation and adaptation. The report focuses on Cambodia, Indonesia, Lao PDR, Malaysia (with specific focus on the States of Sarawak and Sabah), Myanmar, the Philippines, Thailand, and Vietnam.[3] Brunei Darussalam and Singapore do not have large-scale social forestry programs in comparison to other ASEAN nations.

The report has three sections. Section 1 introduces social forestry and climate change in the ASEAN region and outlines key concepts and terms used throughout the report. Section 2 provides a regional overview of forests, the current status of social forestry, and outlines key national and international initiatives related to climate change mitigation and adaptation. It analyzes the readiness of ASEAN countries to implement social forestry in support of climate change mitigation and adaptation strategies such as REDD+, outlines the key issues and challenges involved, and suggests ways in which the ASFN may be able to support this process. Section 3 examines each of the eight focus countries in detail, summarizing key trends relating to social forestry; relevant policies, legislation, and institutions; and progress made towards climate change mitigation and adaptation.

Social Forestry in the ASEAN Region

ASEAN Forests

ASEAN forests currently cover approximately 213 million hectares (mha) of land across 10 countries. Their diverse composition consists of tropical lowland forests, montane forests, coastal mangrove forests, and peat forests, as well as the remnants of what is believed to be the oldest tropical rainforest in the world.

---

1 For the purpose of this report social forestry is used synonymously with community forestry. We follow the definition provided by RECOFTC (2008) – see next page, Definitions of Social Forestry and Community Forestry.

2 Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

3 The report consistently uses country forest data presented in the FAO Global Forest Resources Assessment 2010 in order to allow comparative analysis across the region. The assessment defines forest as "land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use" (FAO 2010). In some cases, national forest data may differ from FAO data due to the varying definitions of forest cover. In cases where alternative data have been provided by government officers and local experts, details are provided in the footnotes.

Millions of people across ASEAN countries depend, directly or indirectly, on the range of economic, environmental, and socio-cultural benefits services derived from forests. Forest-based industries contribute significantly to economic growth, providing employment, raw materials, and export revenues. Up to 300 million people – or over 50% of the ASEAN region's population – live in rural areas and use forests for subsistence needs, including food, fuelwood, timber, medicines and income (FAO 2010). For many of ASEAN's ethnic minorities and indigenous people, forests are also central to cultural identity and spiritual beliefs.

ASEAN forests provide habitat for up to 20% of the world's plant and animal species, many of which are endemic to the region (ASEAN Secretariat 2009). In addition to conserving biodiversity, they perform vital ecosystem services such as protecting watersheds, reducing soil erosion, preventing landslides, and buffering communities from natural disasters. Forests also help to regulate climate by absorbing, storing, and releasing large amounts of carbon dioxide (CO_2), one of the greenhouse gases (GHGs) contributing to climate change.

Development of Social Forestry in the ASEAN Region

The second half of the twentieth century saw a dramatic reduction in forest cover in many ASEAN countries. Indonesia, Malaysia, Myanmar, Thailand, the Philippines, and Vietnam's large timber industries supplied raw materials to domestic and international markets. Large swathes of forestland were cleared for urban expansion, infrastructure development, agricultural production, tree plantations, mining, and hydropower generation. The rapid growth of rural populations and the subsequent increase of small-scale agriculture similarly led to forest clearance.

In the past, ASEAN forests were owned and managed by the state with limited local engagement. State capacity, particularly at the local level, was not sufficiently developed to manage large areas of forestland and prevent encroachment, corruption, poaching, and illegal logging. The World Bank's Forestry Sector Policy Paper (1978), however, indicated a shift away from the previous industrial orientation. The new policy recognized that "the major contribution of forestry to development will come… from its impact on indigenous people... in developing countries" (World Bank 1978, cited in Wode and Huy 2009).

The past two decades have witnessed a growing awareness of the need for long-term strategies, leading to the emergence of SFM as the guiding principle for forest management. SFM offers a holistic approach, integrating the economic, environmental, and social aspects of forest management. It aims to utilize forest goods and services in such a way that meets the needs of present-day communities as well as of future generations.

There has been a gradual move away from state control of forests towards the participation of local people in forest management throughout the ASEAN region. Their engagement helps make decision-making more equitable, improves local livelihoods, and reduces poverty. In addition, giving local people secure tenure to forestland creates powerful incentives to sustainably manage forest resources, which brings greater benefits to both the

people and forests. As a result, some ASEAN governments have begun to officially recognize the role of local people in managing their forest resources.

The distinct natural, economic, and political environments of each ASEAN country have shaped its unique forestry and social forestry practices. Forest policies, legislation, management practices, and institutional capacities vary greatly, particularly with regard to local participation. Consequently, there is no single model for community engagement in forest management that can be applied across the region.

Definitions of Social Forestry and Community Forestry

The term social forestry was first used in the 1976 report of the National Commission of Agriculture in India to describe a program for encouraging people dependent on fuelwood and forest products to produce their own supplies (FAO 1992). Since then, the term has taken on multiple meanings. It is sometimes used to describe a relatively narrow range of activities that produce fuelwood from small woodlots in order to reduce deforestation. Or, it refers to forestry activities that have a predominantly welfare function, such as meeting the subsistence needs of the poor, as opposed to purely commercial activities.

Community forestry is a comparatively general term that covers any situation involving local people in a forestry activity. Examples include woodlots producing fuelwood and non-timber forest products (NTFPs), small-scale industrial production and processing, and subsistence-level cash crops that generate additional income for forest communities. According to the Food and Agriculture Organization of the United Nations (FAO) community forestry has three core elements:

1. Provision of fuel and other goods essential to meeting basic needs at the rural household and community level.
2. Provision of food and the environmental stability necessary for continued food production.
3. Generation of income and employment in the rural community (FAO 1992).

Over the last 30 years, community forestry has evolved into a much broader concept. RECOFTC defines it as a practice that "includes all aspects, initiatives, sciences, policies, institutions, and processes that are intended to increase the role of local people in governing and managing forest resources. It consists of informal, customary and indigenous, and formal or government-led initiatives. Community forestry covers social, economic, and conservation dimensions in a range of activities including indigenous management of sacred sites of cultural importance, small-scale forest-based enterprises, forestry outgrower schemes, company-community partnerships, and decentralized and devolved forest management" (RECOFTC 2008). In short, the concept adopts a participatory approach that is focused on meeting the needs of rural people.

The terms social forestry and community forestry are often used interchangeably. The ASFN uses the term social forestry, which will also be used in this report. Where the report refers to specific national policies and programs, the appropriate terminology will be used.

Climate Change in the ASEAN Region

Global climate change is predicted to lead to rising temperatures, sea-level rise, changing weather patterns, and more unpredictable and severe weather events. It is likely to cause changes in rainfall patterns, flooding, drought periods, forest fire frequency, and fluctuating water availability. The combined effect will decrease agricultural production and increase food insecurity.

Southeast Asia is highly vulnerable to the impacts of climate change. The region has long coastlines and large river deltas, with major cities and large populations concentrated in low-lying coastal areas. A number of ASEAN countries also have steep mountainous areas which are susceptible to landslides. Many ASEAN economies rely heavily on sectors that could be significantly affected by climate change, such as agriculture, forestry, fisheries, and tourism.

The areas most vulnerable to the impacts of climate change have been identified as North and East Lao PDR, Bangkok Province of Thailand, South and West Sumatra and West Java in Indonesia, the Mekong River Delta in Vietnam, most regions of Cambodia, and all the regions of the Philippines (Yusuf and Francisco 2009).

Climate Change Mitigation

Climate change mitigation describes any action taken to reduce the amount of GHGs in the atmosphere and the potential effects of global warming. These actions might include curbing fossil fuel use, developing sustainable energy sources, reducing deforestation, and increasing reforestation.[4]

Nationally Appropriate Mitigation Actions

Nationally Appropriate Mitigation Actions (NAMAs) are part of the Bali Action Plan agreed at the Thirteenth Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in December 2007. They refer to the set of policies and actions undertaken by developing countries to reduce GHG emissions. NAMAs allow countries to take differentiated actions based on their capabilities and development priorities. This enables developing and developed nations alike to participate in global climate change mitigation efforts.

[4] http://www.pactworld.org/cs/redd_glossary accessed on 1 December 2010.

Moreover, NAMAs emphasize the need for developed countries to provide financial assistance to developing countries in support of emissions reductions to further facilitate their participation in mitigation strategies. NAMAs are expected to be submitted for support from the UNFCCC's Green Climate Fund. However, the full details on their development and implementation are not yet clear.

Role of Forests in Climate Change Mitigation

Forests, and particularly tropical rainforests, are an important part of the Earth's carbon cycle. Tropical rainforests store large amounts of carbon in their trees as well as in the soil. Deforestation and forest degradation are major contributors to rising levels of CO_2 in the atmosphere and the associated changes in the Earth's climate. Deforestation – human-induced conversion of forests to non-forestland uses – is typically associated with large immediate reductions in forest carbon stock through land clearance. Forest degradation – the reduction in forest condition through unsustainable forest management or land-use practices – also results in substantial reductions of forest carbon, but over a longer period of time. Together deforestation and degradation account for approximately 18% of global carbon emissions. This figure is more than the global transport sector and second only to global energy production (Stern 2006).

Forests act as carbon sinks, absorbing CO_2 from the atmosphere. Scientists have calculated that tropical forests worldwide absorb 4.8 billion tonnes of CO_2 every year, which is around 18% of the carbon emitted annually through the burning of fossil fuels (Lewis et al. 2009).[5] The consequences of forest loss are therefore two-fold. Firstly, forest loss releases the carbon stored in trees and contributes to higher levels of CO_2 in the atmosphere. Secondly, it reduces the remaining amount of forests that can absorb carbon from the atmosphere in future.

The Stern Review, a major study on the economics of climate change, identified several possible ways of mitigating climate change and highlighted reducing emissions from deforestation as a highly cost-effective strategy to reduce GHG global emissions. The report also recognized that curbing deforestation has additional positive side-effects, such as preserving the other benefits and ecosystem services provided by forests (Stern 2006). These include biodiversity conservation, protection of soil and water quality, and provision of timber and non-timber products that contribute to local livelihoods, cultural heritage, and recreational opportunities.

Forest-based climate change mitigation strategies include: reducing CO_2 emissions produced by deforestation; improving forest management practices to reduce emissions from forest degradation; and increasing forest cover through afforestation and reforestation to increase carbon sequestration. SFM policies and practices, effective forest protection, and increasing the economic returns from non-destructive uses of forest, such as NTFP collection and nature-based tourism, can also help to reduce the rate of deforestation and forest degradation.

---

[5] As cited in *CIFOR Newsletter*, June 2009: see http://www.cifor.cgiar.org/publications/pdf_files/News-47.pdf

Reduced Emissions from Deforestation and Forest Degradation (REDD) and REDD+

REDD places a financial value on forest carbon in order to create economic incentives for forest protection. It compensates countries for their efforts in reducing emissions from deforestation and degradation. REDD+ is an expansion of REDD that incorporates the objectives of SFM, conservation,[6] and forest carbon stock enhancement.

The UN-REDD Programme estimates that REDD+ could generate up to US$30 billion per year from developed economies as incentives to reduce GHG emissions from deforestation and forest degradation in developing countries.[7] It could also provide financial support for rural development, improved livelihoods, biodiversity conservation, and protection of vital forest ecosystem services.

Participants at the UNFCCC's COP16 in Cancun, Mexico agreed to move forward with REDD+. The Cancun agreement is expected to give added impetus to the development of REDD+ and increase the flow of funding to developing (forested) countries. While there are many challenges ahead, REDD+ currently presents the most promising opportunity for maximizing the role of forests in climate change mitigation policy and strategy. It is therefore a major focus of this report.

Because large areas of forests in the ASEAN region are managed by local people, their engagement in REDD+ will be essential to ensure its long-term viability. Local communities and indigenous people must be fully involved at all stages of REDD+, from development and implementation to monitoring, verification, and benefit-sharing. This will help ensure that financial benefits from REDD+ reach local communities, rewarding them for forest protection and compensating them for lost revenues from alternative land uses.

Customary rights and secure land tenure arrangements need to be in place in order for local communities and indigenous people to benefit from REDD+. Local peoples' right to FPIC – as recognized in international human rights law, a number of international conventions, and increasingly in national law in some ASEAN countries – must be upheld so that the needs and concerns of local people can be taken into account in the development of REDD+. Without this key step, measures to improve forest protection and reduce deforestation and degradation could lead to reduced access to forests for local people.

Some REDD+ arrangements currently under development, many of which are relevant for ASEAN, are listed below:

---

[6] The Bali Action Plan and other widely accepted definitions of REDD+ included forest conservation in REDD+. The text agreed at COP16 in Cancun (paragraph 70 of the AWG/LCA outcome) refers to "conservation of forest carbon stocks" rather than conservation in general. Text relating to safeguards in Annex 1 states that all actions should promote and support " 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".

[7] http://www.un-redd.org/AboutREDD/tabid/582/Default.aspx accessed 20 November 2010.

- The UN-REDD Programme was established in 2008 by FAO, UNDP, and UNEP,[8] to support the development and implementation of national REDD+ strategies in developing countries. It is currently supporting some ASEAN countries to prepare for REDD+ implementation. Indonesia and Vietnam were among the first nine partner countries. Cambodia and the Philippines are also partner countries, and have received funding for REDD+ activities.

- The Forest Carbon Partnership Facility (FCPF) is a global partnership of more than 50 countries (both developing and developed) which became operational in June 2008. It has two mechanisms: (1) a Readiness Fund which provides assistance to support (forested) developing countries in their efforts to prepare national strategies and systems for REDD+; and (2) a Carbon Fund which will provide payments for verified emission reductions from REDD+ programs in countries that have achieved or made considerable progress towards REDD+ Readiness. It assists developing countries in their efforts to reduce emissions and develop the necessary systems, policies, and capacity in preparation for REDD+. In so doing, it helps countries prepare themselves for future financing by developing reference scenarios, adopting a REDD+ strategy, and setting up national REDD+ management arrangements and monitoring systems. The FCPF cooperates closely with other initiatives, in particular the UN-REDD Programme and the Forest Investment Program (FIP). There are 37 partner countries worldwide, including the ASEAN countries of Cambodia, Indonesia, Lao PDR, Thailand, and Vietnam.

- The FIP aims to support developing countries' efforts to reduce emissions from deforestation and forest degradation and promote SFM. The FIP will provide up-front bridge financing for readiness reforms identified in national REDD Readiness strategies. As of October 2010 the FIP has received total pledges of US$558 million from developed countries and a total of US$102 million have been deposited so far, although as of July 2010, no funds had been disbursed. Indonesia and Lao PDR are among the FIP's initial five pilot countries.

- The REDD+ Partnership is an interim mechanism launched in May 2010 to help coordinate international action on REDD+, particularly in the lead up to the UNFCCC's COP16. It is open to all countries willing to support or undertake REDD+ actions. As of January 2011, the Partnership included 71 countries, including Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

- Norway's International Climate and Forest Initiative (NICFI) aims to support and participate in the development of the international REDD+ agenda through conducting research, developing the international architecture for REDD+, and demonstrating practical approaches to implementing REDD+ financing. The Initiative is currently supporting five countries worldwide, including Indonesia.

[8] Respectively, the Food and Agriculture Organization of the United Nations, the United Nations Development Programme, and the United Nations Environment Programme.

- The International Forest Carbon Initiative (IFCI) is an initiative of the Australian Government. It supports international efforts on REDD+ through the UNFCCC. It is jointly administered by the Australian Department of Climate Change and the Australian Agency for International Development, and will work through existing international mechanisms.

Climate Change Adaptation

Climate change adaptation refers to activities that increase resilience of natural and human systems to the adverse impacts of climate change. It can be defined as "the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploit beneficial opportunities" (Pact 2010). Some types of adaptation to climate change may occur autonomously as people respond to changes in their environment. Other adaptation efforts, such as infrastructure development and disaster risk reduction strategies, require greater planning and financial resources from local and national governments. Examples of adaptation may include the introduction of new varieties of plants and seeds that are more resistant to drought, flooding or saltwater inundation, building dams or dikes along rivers or coastal areas, and the resettlement of communities from high-risk areas. Adaptation will be essential to deal with the unavoidable impacts of climate change. It will also be most challenging in developing countries where resources for adaptation activities are limited (Stern 2006).

National Adaptation Programs of Action

National Adaptation Programs of Action (NAPAs) allow least developed countries (LDCs) to identify priority activities that respond to their urgent and immediate adaptation needs. NAPAs were adopted at COP7 in Marrakesh in 2001 in recognition of LDCs' high level of vulnerability to climate change and their low capacity for adaptation activities.

Developing a NAPA requires multiple steps: synthesizing existing information; conducting a participatory assessment of vulnerability to current climate variability, extreme events, and climate change risks; identification of key adaptation measures and criteria for prioritizing activities; and the selection of a prioritized shortlist of activities. Funding for preparation and implementation of NAPAs is provided by the UNFCCC and is available to LDCs, including the ASEAN countries of Cambodia, Lao PDR, and Myanmar.

The Role of Forests in Climate Change Adaptation

Forests can greatly contribute to climate change adaptation. They help protect communities and infrastructure from the effects of climate variability. For example, forests can help to prevent landslides on steep or unstable slopes, minimize soil erosion, and regulate hydrological flows during years with abnormally high rainfall. Mangrove forests are particularly important in protecting coastal communities from the effects of natural disasters and climate change, providing a potential buffer against typhoons, storm surges, and tsunamis.

Moreover, forests can help increase the resilience of people to climate change. Forest products help to diversify livelihoods, thereby reducing dependence on agricultural production. They also act as important safety nets, providing essential goods and services, such as fuelwood, building materials, and medicines that may help people recover from natural disasters.

Poor people living in and around forested areas are often the most vulnerable to the negative effects of climate change. Nonetheless, forests – when properly integrated into adaptation strategies – can increase the ability of rural people to cope with climate change throughout the ASEAN region.

Linkages between Social Forestry and Climate Change Mitigation and Adaptation

Forests clearly play an important and complex role in climate change. Deforestation and degradation are major contributors to GHG emissions. Yet forests can also help reduce the levels of carbon in the atmosphere as well as increase the resilience of vulnerable communities to climate change.

Social forestry works for the empowerment of the millions of people who depend on forestland and resources for their daily needs. It aims to balance economic, environmental, and social uses of forests and to engage local people in SFM. When effectively employed, social forestry has great potential to protect and restore forests, conserve biodiversity, improve livelihoods, reduce vulnerability to climate change, and sequester carbon.

Social forestry is well established in many ASEAN countries, with the required legal frameworks, policies, and institutions already in place. Although further capacity building is necessary, social forestry may provide a useful platform for the development and wide-scale implementation of REDD+ in the ASEAN region, particularly in terms of strengthening local support and participation.

Experiences from a REDD+ pilot project in Cambodia testify to the potential synergy between social forestry and REDD+ initiatives. The project's engagement of forest-dependent communities has been critical in controlling deforestation and forest degradation (Poffenberger 2009).

Section 2

Regional Analysis of Social Forestry in the ASEAN Region

Section 2

Regional Analysis of Social Forestry in the ASEAN Region

Extent of Forest Cover in the ASEAN Region

The ASEAN region is one of the most densely forested areas in the world. Collectively, the 10 member countries contain a total of 213.3 mha of forestland, covering 49% of their combined total land area (FAO 2010).[9] This is a significant volume in comparison to the global average of 30%.

The extent and proportion of forest cover in the ASEAN region varies greatly from country to country. Singapore has the least amount of forest cover at 2,300 ha. Indonesia has by far the largest amount of forest cover at 94 mha.[10] With the exception of Singapore, the Philippines has the lowest proportion of forest cover: 26% of its total land area is forested. According to FAO figures, Lao PDR has the highest proportion of forest cover with 68% of its land still covered with forest, although official Lao PDR Government figures put the figure much lower at 41.5% (MAF 2005).

Total Land Area and Forest Cover in ASEAN Countries

Country	Total Land Area* (ha)	Forest Cover (ha)	Forest as % of total land area
Brunei	567,000	380,000	67
Cambodia	17,652,000	10,094,000	57
Indonesia	181,157,000	94,432,000	52
Lao PDR	23,080,000	15,751,000	68
Malaysia	32,855,000	20,456,000	62
Myanmar	65,755,000	31,773,000	48
Philippines	30,000,000	7,665,000	26
Singapore	68,900	2,300	3
Thailand	51,089,000	18,972,000	37
Vietnam	32,930,000	13,797,000	42
TOTAL	**435,153,900**	**213,322,300**	**49**

* Excluding inland water.
Source: FAO Global Forest Resources Assessment (2010).

[9] According to the ASEAN State of the Environment report 2009, the region has a forest-to-land ratio of 43% (ASEAN Secretariat 2009).

[10] Alternative figures provided by the Directorate-General of Forestry Planning, Ministry of Forestry indicate that there are 137 mha of forest in Indonesia, covering 75.5% of the total land area (personal communication, February 2011).

Deforestation and Forest Degradation in the ASEAN Region

The ASEAN region's forests face pressure from multiple sources. Rising population has led to increased encroachment, human settlement, and conversion to agricultural land for food production. Infrastructure development such as dams, mines, hydropower facilities, and roads has made previously forested areas vulnerable to damage. Furthermore, a history of resource exploitation for economic growth pervades the region.

Between 2000 and 2007, forest cover in ASEAN declined by 18.5 mha – an average of approximately 1.3% per year. However, the rate of deforestation appears to have slowed recently, in large part due to afforestation and reforestation efforts in the Philippines and Vietnam.

The extent of mangrove forests in the ASEAN region has also declined. Over 1 mha of mangrove forest were lost between 1980 and 2005 (ASEAN Secretariat 2009) due to expansion of coastal development and shrimp farming, among other activities.

The table below shows the average annual loss of natural forest in each ASEAN country between 2005 and 2010, based on FAO figures.

Rates of Deforestation in ASEAN Member States, Natural Forest

Country	Average Annual Change 2005-2010 - Natural Forest (ha)	Average Annual Change 2005-2010 - Natural Forest (%)
Brunei	-2,000	-0.47
Cambodia	-144,000	-1.26
Indonesia	-485,000	-0.51
Lao PDR	-91,000	-0.60
Malaysia	-128,000	-0.64
Myanmar	-339,000	-0.99
Philippines	+52,000	0.77
Singapore	0	0.00
Thailand	-91,000	-0.57
Vietnam	+61,000	0.63
TOTAL	**-1,167,000**	

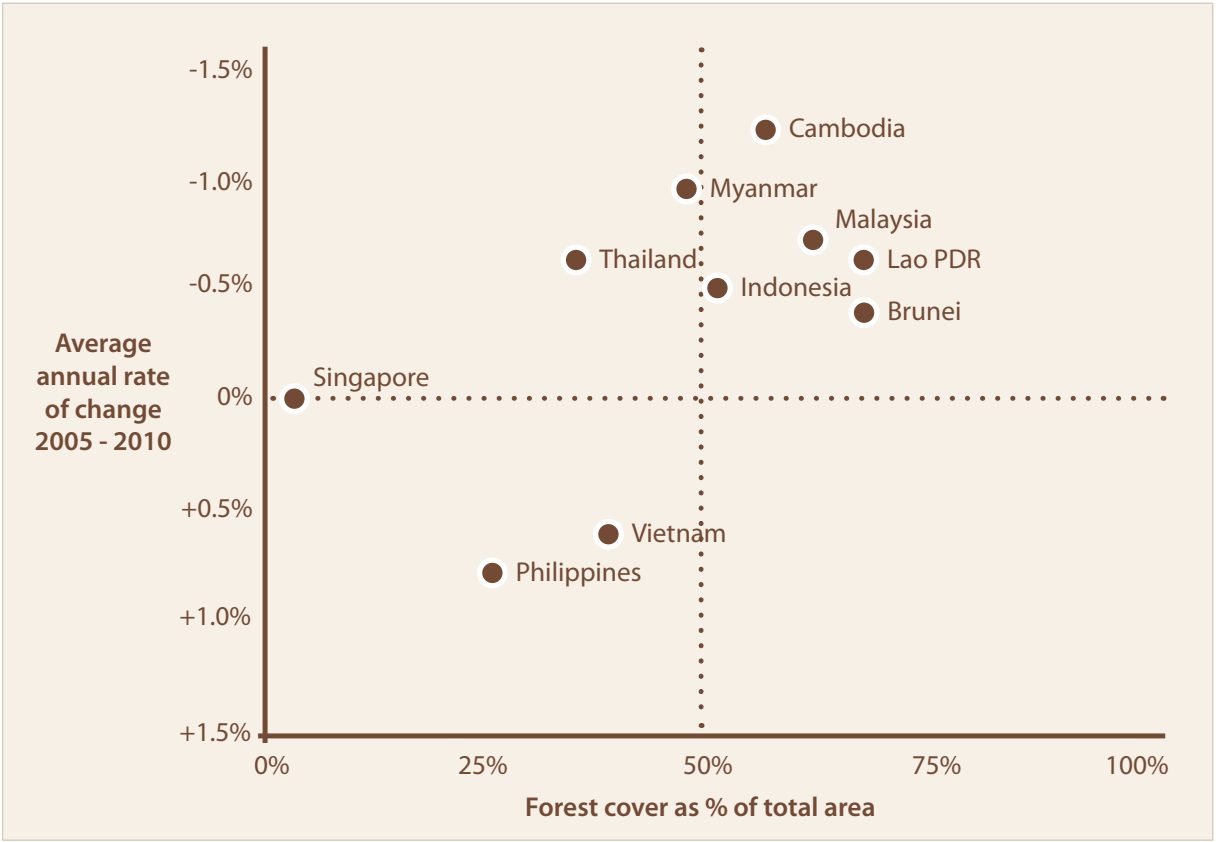
Source: FAO Global Forest Resources Assessment (2010).

Indonesia and Myanmar lose the largest areas of natural forest each year, at 485,000 ha and 339,000 ha respectively, followed by Cambodia (144,000 ha per year) and Malaysia (128,000 ha per year). Both Thailand and Lao PDR lose 91,000 ha of natural forest annually. Cambodia currently has the highest rate of deforestation in the ASEAN region at -1.26% on average per year, followed by Myanmar with -0.99%.

Although small in area, all of Singapore's remaining forest is protected. Forest cover in the Philippines and Vietnam has increased in recent years, due to the implementation of large-scale national afforestation and reforestation programs. However, much of these increases in forest cover have been achieved through the planting of commercial species for timber production. Vietnam's example is telling: despite its 0.63% increase, primary forest has continued to decline with a loss of around 300,000 ha in the last 20 years (FAO 2010).

The figure below plots the proportion and average annual change in forest cover in ASEAN countries between 2005 and 2010. Countries on the right side of the chart have more than 50% of forest cover as a percentage of their total land area. Countries in the lower section of the chart have seen an increase in forest cover in the last five years, whereas countries in the top section of the chart have lost natural forest cover. Countries situated in the top right quadrant (Cambodia, Malaysia, Lao PDR, Indonesia, and Brunei Darussalam) have both high proportions of forest cover and high rates of deforestation. These forests are the most at risk from exploitation.

Proportion of Forest Cover and Annual Rates of Change in ASEAN Countries



The Status of Social Forestry in the ASEAN Region

Forest Governance

In most ASEAN countries forestland is regarded as the property of the state. Forest resources are considered to be owned by the nation and managed by the state. In most countries forests are managed by a central national forest department or administration, which is overseen by the ministry responsible for natural resources, agriculture or the environment. The exception is Malaysia, where there are three regional forest departments, for Sabah, Sarawak, and the states of Peninsular Malaysia, which have a high degree of autonomy to manage the forest resources in their respective zones.

Government forest institutions are responsible for monitoring compliance with relevant forest policies, laws, and practices, as well as allocating forestland to households and communities for social forestry activities. Myanmar has a highly centralized political system and the Central Forest Department retains considerable control over the country's forest resources. In Indonesia, Vietnam, and the Philippines systems are more decentralized and local government authorities play a much greater role in forest management. At the local level social forestry is implemented by village- or community-level institutions, such as Peoples' Organizations in the Philippines. In Vietnam forest management can be carried out by State-owned companies, People's Committees, households or Forest Management/Protection Boards.

Status of Social Forestry Legislation, Policy, and Practice

A number of countries – including Indonesia, Lao PDR, Myanmar, the Philippines and Vietnam – have developed national-level policies and legislation that provide for community access to forest resources. Through its Community-based Forest Management (CBFM) scheme, the Philippines has established comprehensive legal and institutional frameworks to enable communities to engage in forest management for specific purposes. Estimates of the amount of forestland under community management in the country range from almost 3 mha (FAO 2010) to 6 mha (Lasco *et al*. 2010).

Social forestry in Vietnam is similarly well established, with approximately 25% of the total forest area managed by households or communities (Nguyen *et al.* 2010). Recent developments include new laws and guidelines, as well as a comprehensive legal and institutional framework to manage social forestry. Nonetheless, several aspects of forestland allocation and community management require strengthening and scaling up.

Cambodia, Lao PDR, and Myanmar have developed adequate legal frameworks for community forest management. In 2007, an amendment to the Lao PDR Forestry Law strengthened SFM. However, institutional capacity and implementation of SFM laws, policies, and practices remain relatively weak in these countries. Weak governance, corruption, and military control over forest resources have marginalized some communities by restricting their access to forest resources.

In Indonesia, a variety of social forestry models have been developed and implemented since the late 1990s, and social forestry has been incorporated in national policy, legislation, and institutions. Thailand has recognized social (or village) forestry as a strategy for forest management since the 1970s (FAO 2009a). But since the early 1990s, a lack of consensus has delayed the enactment of its Community Forest Bill and subsequent implementation in protected areas. In 2007, concerns emerged about the Bill's possible violation of Constitutional rights of indigenous people and local communities to forests inside protected areas (RECOFTC 2008).[11]

State authorities are responsible for implementing SFM in Malaysia. Commercial forestry and tree crop plantations (especially oil palm) are well established, and generate significant economic benefits for the country. Although forest laws and policy permit collection of NTFPs in forest reserves and the employment of indigenous people in agroforestry and forest-based industries, there is no official policy or legal provision for the participation of local people in forest management. Official social forestry takes the form of a small number of individual projects that are supported by either the forest departments or non-governmental organizations (NGOs). Although the Sabah Land Ordinance and Sarawak Land Code recognize Native Customary Rights (NCR), the Government's definition of NCR restricts access rights to land that was cultivated before 1958. Indigenous people, however, believe their customary rights also extend to the natural forests within their customary communal lands (Bian n.d.).

Key Features of Social Forestry in the ASEAN Region

Country	Terminology	Key Features
Brunei Darussalam	• Sustainable Forest Management	• Education and awareness • Encourage participation in reforestation, afforestation and natural regeneration
Cambodia	• Community Forestry • Community Protected Areas • Community Fisheries	• Forestry Administration may allocate areas within the Permanent Forest Reserve for community management under renewable 15-year agreements
Indonesia	• Up to 10 different forms of community engagement in forest management	• Promote involvement of local people in management of forest plantations • Build capacity and empower communities to engage in forest management • Encourage forest concession holders to take a participatory approach to forest management and engage with local communities
Lao PDR	• Participatory forest management • Collaborative forest management • Traditional forest management • Community-based forest management for ecotourism • Smallholder industrial plantations • Village forests	• Different types of models exist depending on forest function and ownership • Production forests managed with village organizations that receive a share of timber revenue • Village forests for timber and NTFPs: Degraded forestland allocated for tree planting, grazing, and crop production. Three-year land use certificates may be followed by long-term use rights.

[11] http://www.rightsandresources.org/blog.php?id=34 accessed on 26 November 2010.

Country	Terminology	Key Features
Malaysia	• Rural / Village Forestry • Agro-forestry • Recreation Forests • Urban Forestry	• Community engagement in rehabilitation of degraded forests • Community engagement in tree planting in urban areas • Discourage of shifting cultivation
Myanmar	• Community Forestry	• Community-based agroforestry systems based on the '*taungya*' model and traditional/village forestry
Philippines	• Community-based Forest Management	• Under Community-based Forest Management Agreements communities can use forest resources for livelihood purposes for a renewable 25-year period • Certificates of Ancestral Domain Claim (CADC) recognize indigenous peoples' rights to occupy, manage, and benefit from forests and natural resources
Singapore	• All forest is protected for biodiversity conservation	• Exploitation of forest resources is prohibited
Thailand	• Community Forestry	• Community forests are permitted in national forest reserves and can be used for collection of wood products, rearing of animals, and hunting of permitted species. Tree felling and shifting cultivation are prohibited • Plantation forests can be used to harvest timber and fuelwood
Vietnam	• Community Forest Management	• Land use rights allocated to communities, households, and individuals through land use certificates

The Role of Civil Society in Social Forestry

The relative strength or weakness of civil society has significant influence on forestry. Well-developed civil societies in some ASEAN countries have the capacity and experience to work in an array of forest-related issues. In Indonesia, for example, there are many civil society organizations working on forest conservation, illegal logging, and indigenous people's rights and access to forestland.

Civil society in the Philippines is also relatively robust. It has led the initial development of REDD+ by establishing the CoDe-REDD network and preparing the Philippines National REDD+ Strategy (PNRPS). In addition, the National CBFM People's Organisation Federation represents the interests of more than 20 million forest residents. An important safeguard for community rights and ownership, the Federation voices the interests of rural and indigenous people at high-level discussions and negotiations.

In countries where civil society is relatively weak – such as Cambodia, Lao PDR, Myanmar, and Vietnam – the rights and interests of indigenous people may be more easily sidelined.

Overview of Progress on Climate Change Mitigation and Adaptation in the ASEAN Region

Progress on Climate Change Mitigation in the ASEAN Region

The forestry sector is a key contributor to CO_2 emissions in many ASEAN countries. However, it can also be a key contributor to atmospheric CO_2 reductions by curbing deforestation and degradation and by enhancing carbon stocks in forests.

Cambodia's Initial National Communication states that the forestry sector is responsible for 97% of the country's CO_2 emissions. Accordingly, a Cambodian Millennium Development Goal aims to maintain forest cover at 60% of the country's total land area by 2015, which may help to mitigate some emissions from deforestation (Forest Administration 2010).

The vast majority of Indonesia's CO_2 emissions come from deforestation, degradation, peat fires, and land-use change. Indonesia has pledged to reduce its carbon emissions by 26% by 2020, and by up to 41% with international support (MoF 2009). To this end, the Ministry of Finance has outlined the fiscal and economic policies for accommodating emissions reduction strategies, the development of low-carbon technologies, carbon finance, carbon taxes, and institutional strengthening.

CO_2 emissions in Lao PDR are relatively low compared to other countries. In 2005, Lao PDR was placed 144 in the world ranking for levels of CO_2 emissions (CAIT 2010).[12] The Government's Forest Sector Strategy to 2020 (FS2020) set a target of naturally regenerating 6 mha of forestland, which will entail planting 500,000 ha of trees in badly degraded areas and restoring forest cover to 70% of the total land area (MAF 2005). While these goals are mainly intended to improve rural livelihoods and to mitigate the impact of natural disasters, they will also help mitigate CO_2 emissions.

According to the 2007 UN Development Report, Malaysia's CO_2 emissions between 1990 and 2004 increased faster that any other country (Westerholm 2010). At the UNFCCC's COP15, the Prime Minister pledged a reduction of up to 40% of the country's emissions per unit of Gross Domestic Product (GDP) by 2020, on the condition that developed countries provided technological and financial assistance. Malaysia has initiated a number of research studies and projects with the similar aim of reducing GHG emissions in the energy, waste, and agriculture sectors. It has also committed to maintaining its forest cover at 50% of the total land area.

In Myanmar, national strategies for the reduction of GHG emissions have been developed in key socio-economic sectors, including energy, agriculture, LULUCF, industrial processing and product use, and waste management.

Since the early 1990s, the Philippines has been at the forefront of climate change mitigation strategies in the ASEAN region. As early as 1997, the country had developed its National Action Plan

[12] Climate Analysis Indicators Tool (CAIT) Version 7.0. Washington, DC: World Resources Institute (2010).

on Climate Change to provide guidance on mitigation priorities. Since then, both a Presidential Task Force and a Climate Change Commission have been created to broadly address climate change issues. The 2009 National Climate Change Act aims to mainstream adaptation and mitigation into Government policy and prepare the country to respond to climate change.

Thailand was ranked as the 27th largest contributor to global GHG emissions in 2005 (CAIT 2010). The Office of Natural Resources and Environmental Planning (ONEP) calculated that in 2002 the energy sector accounted for 69% of GHG emissions, and that the LULUCF sector accounted for 24% (MNRE 2009). Thailand has developed a Strategic Plan on Climate Change (2008-2012) and a National Master Plan on Climate Change for 2010-2019. Currently, it is preparing its Forest Sector Strategic Plan on Climate Change. These plans outline the likely impacts of global warming, and propose mitigation and adaptation options.

Vietnam has created its National Target Program (NTP) on Climate Change to identify and assess the likely impacts of climate change throughout different sectors and locations. The NTP supports the development of strategies, action plans, and institutional capacity to effectively respond to climate change. This includes mainstreaming climate change concerns into relevant sector development plans.

Progress on Development of REDD+ in the ASEAN Region

Steady progress is being made towards REDD+ in the ASEAN region and Member countries are engaged in a range of REDD+ partnerships and programs.

Cambodia is an observer partner under the UN-REDD Programme and is also engaged in the FCPF. It has prepared its Readiness Plan Idea Note (R-PIN) and has received US$3 million in funding for REDD+ Readiness activities. Its Readiness Preparation Proposal (R-PP) was submitted in January 2011. There are at least two major pilot projects underway in the Seima Protection Forest and Oddar Meanchey. The Forest Administration implements the latter, with support from a number of organizations including Community Forestry International and Pact.

Indonesia is involved in a range of REDD+ initiatives, including the UN-REDD Programme, the FIP, the FCPF, the NICFI, and the IFCI Kalimantan Forests and Climate Partnership. It is currently finalizing its National REDD+ Strategy. To date, approximately 50 pilot projects have been implemented or are currently underway.

Lao PDR is a partner country in the FCPF and its R-PIN was approved in August 2008. The Department of Forestry submitted an R-PP in August 2010, which was later approved in October of that year. Lao PDR is also a pilot country for the FIP, and pilot projects testing various aspects of REDD+ are taking place under the SUFORD, CLiPAD, and WCS projects.[13]

[13] Respectively, Sustainable Forestry and Rural Development Project, Climate Protection through Avoided Deforestation Program, and World Conservation Society.

Forestry in Malaysia has a strong focus on SFM. Although Malaysia supports the concept of REDD+ in principle, its engagement in REDD+ initiatives has thus far been limited due to concerns that REDD+ will not sufficiently benefit countries with large areas of forest under SFM. Accordingly, Malaysia's National REDD+ Strategy has yet to be developed, although there are initial plans for the State of Sabah to proceed with development of a State-level REDD+ Strategy.

The Philippines' PNRPS was approved in August 2010 and a number of REDD+ pilot projects are underway. As an observer partner country in the UN-REDD Programme, it has received funding for REDD Readiness activities. Although total forest cover in the Philippines is increasing, the persistence of deforestation in certain provinces may benefit from local-level REDD+ strategies.

Thailand is engaged in the FCPF and its R-PIN was approved in March 2009.

Vietnam is a partner in the UN-REDD Programme and the FCPF and is at the forefront of REDD+ development in the ASEAN region. Its initial draft R-PP was submitted in August 2010 with a revised draft submitted in January 2011. The Vietnam UN-REDD Country Programme has begun formal preparations for field-based REDD+ activities in Lam Dong Province. The Programme is also engaged in a broad consultation exercise with local governments, mass organizations, and local communities to raise awareness on REDD+ and comply with obligations for FPIC.

Progress on Climate Change Adaptation Activities in the ASEAN Region

Some of the countries that are most at risk from the impacts of climate change have started to incorporate climate change adaptation and disaster preparedness concerns into their development planning. Various ASEAN countries have recognized the role of mangrove forests in potentially protecting coastal communities from storms and tidal surges, and accordingly, are implementing community-based mangrove reforestation and rehabilitation projects in vulnerable areas.

Cambodia's NAPA identifies forestry, agriculture, human health, and the coastal zone as priority areas for climate change adaptation. It highlights the importance of forests for overcoming threats to food security, livelihoods, and environmental health posed by climate change.

Indonesia prepared a National Action Plan Addressing Climate Change (RANPI) in 2007 to support Government institutions in their efforts to address climate change adaptation. The Climate Change Sectoral Roadmap 2010 provides guidance on mainstreaming climate change issues into national development planning.

Lao PDR submitted its NAPA to the UNFCCC in May 2009. The NAPA analyzes recent climate trends and the adverse impacts of climate change, and prioritizes adaptation options in the agriculture, forest, water, and public health sectors. Furthermore, it identifies 45 key proposals for adapting to climate change. These include eliminating shifting cultivation practices and strengthening the capacity of village forestry volunteers to plant and manage village forests.

Myanmar is currently preparing its NAPA with financial support from the Least Developed Country Fund and UNEP (Vickers *et al.* 2010). It established a National Disaster Preparedness Central Committee (NDPCC) in 2008. It has prepared an Action Plan on Disaster Risk Reduction (MAPDRR) for 2009-2015 that identifies activities to meet its targets under the Hyogo Framework for Action (HFA) and the ASEAN Agreement on Disaster Management and Emergency Response Commitments. The Forest Department is implementing a number of forest conservation and reforestation programs that may help to reduce the vulnerability of forest ecosystems to climate change, reduce forest degradation and fragmentation, and contribute to biodiversity conservation. Other adaptation efforts include community-based reforestation of mangrove forests in the Ayeryawaddy Delta.

Malaysia is undertaking a number of research studies and projects on climate change adaptation, including the likely impact of climate change on disease patterns, water resources, and a coastal vulnerability study. A community-based mangrove rehabilitation project in Peninsular Malaysia is in implementation stages.

The island nation of the Philippines is highly vulnerable to climate change and has placed considerable emphasis on adaptation activities. The Government has developed national-level policies and institutions to address climate change and mainstream adaptation and mitigation measures into sector development plans. Some provincial governments – most notably that of Albay Province – are actively engaging in climate change adaptation activities and disaster risk reduction measures at the local level.

Adaptation activities in Thailand include the development of plans for flood prevention in Bangkok, as well as a number of NGO-supported projects in the north and northeast. These projects aim to increase the resilience of local farmers to the effects of climate change. In the south, there are a number of mangrove reforestation and coastal resource management projects underway, supported by NGOs such as Mangroves for the Future and the Mangrove Action Project, which may help to reduce the impacts of climate change on coastal communities.

Vietnam has developed an Action Plan Framework for Adaptation to Climate Change to increase capacity for adaptation and mitigation, minimize the worst impacts of climate change, and ensure sustainable development in agriculture and rural development. Furthermore a number of international NGOs are supporting local communities to identify vulnerabilities and increase their resilience to climate change.

Much of the research, policy, and strategy development relating to forestry and climate change have focused on mitigation strategies, as opposed to adaptation. Further research is required on how best to enhance and promote the role of forests in climate change adaptation efforts, including the role of social forestry. This could be an important area for further research and the piloting of new approaches.

Furthermore, the productivity of forests themselves could be affected by climate change due to rising temperatures, drought, forest fires, pests and diseases, flooding, and rising sea levels. The need

to better understand how climate change might affect ASEAN forests is likewise urgent – especially in light of their importance to economic development, local livelihoods, ecosystem services, and climate change mitigation and adaptation.

Readiness of Social Forestry to Support Climate Change Mitigation and Adaptation

A country must meet a number of requisite conditions before engaging in social forestry for climate change mitigation and adaptation. Considerable areas of forestland are required, and these lands should be demonstrably under threat from deforestation and degradation. This is the case in Cambodia, Myanmar, Lao PDR, Indonesia, and Malaysia. Although overall forest cover in the Philippines and Vietnam is increasing at the national level, REDD+ may help protect threatened areas of natural forest at the local level.

Social forestry is at varying levels of development and implementation across ASEAN countries. In some countries, the establishment of social forestry is a key strategy for SFM. In others, the capacity to implement social forestry remains weak, despite the presence of the necessary legal and institutional frameworks. The recognition of customary rights and processes of land allocation also differs vastly in ASEAN countries.

In Cambodia, social forestry is well established in national policy, legislation, and strategic planning documents, and moreover, is consistent with the Government's strategies for decentralization, poverty reduction, and environmental management. Community Forest Guidelines issued in 2006 established procedures to allow communities to officially register their community forests. However, the implementation of social forestry has been limited in practice, with only 94 community forests legally recognized in 2010. This is due in part to the limited abilities of the Forestry Administration, local government staff, and local communities to understand, manage, implement, and monitor community forestry. Establishing an official community forestry project is costly and time consuming. It requires significant legal and technical knowledge, and is therefore dependent on external support and funding from donors and NGOs (RECOFTC and the Learning Institute 2010).

The UN-REDD Programme granted Cambodia US$3 million for REDD+ Readiness activities in November 2010. The Oddar Meanchey REDD+ pilot site continues to provide valuable lessons for project development, particularly regarding the importance of local-level participation in forest protection. However, there are many challenges facing the country, including weak governance, rampant corruption, a lack of coordinated land-use strategies, and persistent economic drivers of deforestation.

Official social forestry in Indonesia has evolved over the last 30 years. In fact, several legal and policy documents mention the participation of local communities in forest activities. Various models, for instance Community Forest (*KHm*) and Village Forest (*Hutan Desa*), have developed to promote the participation of local people in forestry activities. Indonesia is currently in the process of finalizing

its National Strategy on REDD+ and is also engaged in REDD+ Readiness activities. It is a partner in a number of international and bilateral partnerships for REDD+. Over 50 demonstration projects will generate considerable knowledge and experience on REDD+.

Lao PDR has recognized the importance of local participation in SFM. Its village forestry model requires a high degree of local participation throughout all stages of forest management. Accordingly, Lao PDR has established the legal framework for the transfer of ownership and management of forests from the State to local communities. By 2005 some 420,000 households – or more than 60% of all agricultural households – received land under the national land allocation process (MAF 2005). With funding from the FCPF, Lao PDR developed its R-PP. It is also a pilot country under the FIP. Pilot projects testing certain aspects of REDD+ are taking place under various forestry projects.

Malaysia's State forestry agencies handle most forest management activities. While there is no legal provision for the engagement of local people in forest management, there are many unofficial social forestry projects. These are often supported by external donors and NGOs, and implemented by the State Department with local participation. Indigenous peoples' customary rights to access land and forests are not secure, leading to their exclusion from customary forestlands, as seen in the States of Sabah and Sarawak. Malaysia supports REDD+ in principle but is not currently engaged in REDD+.

In Myanmar, the forest policies and laws enabling local participation in forest management do not provide for secure long-term tenure to access forests. Furthermore, implementation capacity is relatively weak – most apparently at the local level. Myanmar discussed its potential participation with the UN-REDD Programme in 2010, but has yet to engage.

Social forestry in the Philippines is established under CBFM, the national strategy for forest management. Comprehensive legal frameworks recognize local communities as the legitimate managers of forest resources. However, the implementation of social forestry policies has not always been effective due to the centralization of forest management functions and weak capacity of forest institutions. The Philippines has made considerable progress in developing climate change mitigation and adaptation strategies, most prominent is its community-oriented National REDD+ Strategy.

Thailand has recognized social forestry as a strategy for SFM. But the lack of an official framework for local participation in forest management has resulted in the limited recognition of indigenous peoples' rights. Unresolved issues relating to access to protected areas for social forestry, for instance, may delay the development and implementation of REDD+. Until these issues can be resolved, it is unclear how social forestry and REDD+ will develop.

In Vietnam, 25% of the country's forests are already under household or community management. The policies, legal framework, procedures, and institutions necessary for social forestry have been developed and enacted. Nevertheless, these frameworks can be strengthened and adapted to accommodate REDD+ (Sikor and Nguyen 2010). Through large-scale national afforestation and reforestation programs such as Programme 661, local communities have acquired valuable experience in reforestation and forest protection. The UN-REDD Country Programme in Vietnam is the first country program to proceed with formal preparations for field-based REDD+ activities.

In accordance with FPIC requirements, Vietnam is undertaking an involved consultation process with provincial and district officials, mass organizations, and local communities in two pilot districts. The effort aims to increase local awareness of climate change, REDD+, and UN-REDD Programme activities.

Readiness to engage in social forestry in support of climate change mitigation and adaptation is clearly variable throughout the ASEAN region. Indonesia, the Philippines, and Vietnam are making considerable progress towards REDD+. Cambodia, Lao PDR, and Thailand have also initiated development of REDD+. Malaysia and Myanmar, conversely, have yet to begin significant development of REDD+ strategies.

Pilot projects have been initiated to test models and mechanisms for wide-scale REDD+ implementation. Experiences and lessons from through these projects can be shared among stakeholders at various levels to build greater overall capacity for development and implementation of REDD+ in the region.

Opportunities and Challenges

Many challenges need to be addressed if social forestry and REDD+ are to become effective mechanisms for climate change mitigation, forest protection, and improved livelihoods for forest-dependent people.

Legal and Institutional Frameworks

In most ASEAN countries, national policies and legal frameworks for local participation in forest management exist, but may require updating or adapting to accommodate implementation and monitoring of REDD+ and equitable distribution of benefits. In Thailand, these frameworks have yet to be officially established. Although Malaysia lacks an official policy or mechanism for local participation, the State permits collection of NTFPs in forest reserves and encourages employment of local people in wood-based industries. Still, the lack of formal rights to access forestland may prevent indigenous communities from participating in and benefiting from REDD+.

Capacity Development

Awareness and understanding of global climate change and of mitigation and adaptation strategies need to be enhanced. The capacity of government agencies and forest institutions in ASEAN countries to implement social forestry, forest protection, and REDD+ varies. However, it is fair to say that the capacity of all stakeholders, particularly at district and local levels, must be increased for effective implementation of social forestry, as well as for the development, implementation, and monitoring of REDD+.

Their success likewise depends on the design and implementation of new systems for Monitoring, Reporting, and Verification (MRV) and mechanisms for benefit-sharing. These systems will help ensure that local forest custodians receive financial rewards from REDD+. The capacity of national and local forest protection agencies, communities, and law enforcement agencies will also need improvement.

Rights, Land Tenure, and Participation

Properly developed and implemented, REDD+ has the potential to help strengthen rural and indigenous peoples' rights and engagement in forest management. However, as governments move towards improving forest protection measures to increase carbon stocks and access REDD+ financial benefits, the exclusion of local people from the forest is possible. Without the full participation of local people, REDD+ could further marginalize rural communities, leading to increased conflict over forestlands.

Participation of forest-dependent people is therefore crucial to the efficacy of mitigation schemes. Recognition of rights and secure tenure to forestlands, in turn, are necessary in securing their full participation. Without these rights and tenure, local people cannot be confident of an equitable share in the potential benefits of REDD+. Furthermore, they give local people a genuine sense of ownership of the forest and a greatly enhanced commitment to forest protection efforts, as seen at the Oddar Meanchey REDD+ pilot project in Cambodia (Bradley 2009).

Although Malaysian law promotes 'positive discrimination' of *Bumiputra* people (ethnic Malay and indigenous people), these laws are not sufficiently robust in practice to protect indigenous peoples' customary rights to their lands. Moreover, the Malaysian Government's understanding of NCR is more restrictive than that of its indigenous peoples. Although a recent series of High Court judgements are beginning to challenge the interpretation of State laws, indigenous people in Malaysia remain vulnerable to exclusion from forests and land-use change. Much in the same vein, the Thai Constitution of 2007 made progress in the recognition of customary rights, but many indigenous people are still denied basic rights of citizenship, including political rights, landownership, and access to basic services.

Even in countries where the rights of indigenous people to access forestland are recognized in national law, many factors including competing land uses, geographic isolation, and social and political exclusion, can contribute to their continued marginalization. Implementation of land allocation policies has faced many challenges throughout the region. In Vietnam, ineffective forestland allocation practices have resulted in confusion about access rights and benefits, lack of security, and increased forest loss and degradation. Meanwhile in Lao PDR, the land allocation process may have reduced the area of land available to each household, with negative impacts on livelihoods and forest protection.

Awareness, Consultation, and FPIC

FPIC requirements by international law necessitate extensive consultation with forest communities and indigenous people. Such a dialogue ensures the integration of their needs and concerns in REDD+. But in light of the geographic isolation of many forest-dependent communities, as well as the great diversity of ethnic languages in ASEAN countries, this is a challenging task.

Economic Drivers of Deforestation and Land-use Change

For hundreds of years, forest resources have been exploited because the short-term financial rewards are considered more attractive than the long-term benefits of SFM. Unsustainable forest management practices and the conversion of forestland for profitable uses have reduced forest cover in many ASEAN countries.

Commercial timber extraction, palm oil production, large-scale agriculture, hydropower generation, and mining are important economic activities in many ASEAN countries. They are also major drivers of deforestation. For example, the Cambodian Government's efforts to attract investment, create rural employment, and increase exports through allocation of Economic Land Concessions (ELCs) have often resulted in conversion of primary forests for large-scale agricultural projects and rubber plantations. Because the timber trade, both legal and illegal, and the agricultural commodity trade generate significant revenue for low-income ASEAN countries, there are powerful economic disincentives to pursuing SFM and REDD+.

Palm oil is a particularly important commodity in ASEAN countries. Indonesia and Malaysia produce 83% of the global supply of palm oil (Brown and Jacobson 2005). In both countries, the area of land devoted to palm oil production has increased substantially to meet rising global demand for palm oil for biofuel and edible oil. This expansion has taken place at the expense of lowland tropical rainforests and rich peatlands, which contain high levels of biodiversity and store vast amounts of carbon. A 2008 study estimated that it would take 75 to 93 years for the carbon emissions saved from the use of palm oil in biofuel to compensate for the carbon released from forest clearance to make way for palm oil plantations. For plantations established on peatlands, this would take over 600 years. Therefore replacing high-carbon natural forests with oil-palm plantations in an effort to reduce the use of fossil fuels may be highly counterproductive, precariously accelerating climate change rather than mitigating it (Westerholm 2010).

At current valuations of forest carbon credits, it is unlikely that REDD+ will be able to compensate for the opportunity costs of some of the more profitable alternative land uses, such as palm oil production (Koh and Butler 2009). In other words, it may remain more profitable to convert a forest to an oil-palm plantation than to preserve it under REDD+.

Rural communities in low-income countries are heavily dependent on agriculture for subsistence and income. Rising population has led to greater encroachment and conversion of forestland for agriculture, as well as increasing pressure on the remaining forest resources to provide food and support livelihoods. A key challenge for REDD+, as for any forest conservation strategy, will be whether it can generate adequate financial benefits to incentivize forest protection and prevent further conversion of forest for other uses.

Continued Market Demand for Timber and Forest Products

Much of the debate on REDD+ has focused on issues in developing tropical countries and on the suitability of proposed mechanisms to address these issues. It is clear that international carbon-financing systems alone will be insufficient to address the root causes of deforestation and degradation. The international drivers of tropical deforestation also demand attention. The global demand for timber, furniture and other wood products, paper, NTFPs, and palm oil produces significant revenue streams for developing forested countries. As long as this demand continues, the economic incentives to supply forest products will remain high, thus reducing progress towards forest protection goals.

Market-driven initiatives can help, however. Certification schemes such as the Forest Stewardship Council (FSC) and industry standard-setting bodies such as the Roundtable for Sustainable Palm Oil (RSPO) will be critical in driving such initiatives forward. Regulation of international trade in forest products is also essential, whether through negotiated agreements – such as the European Union's Forest Law Enforcement Governance and Trade (FLEG-T) – or through unilateral trade restrictions such as those under the United States' Lacey Act. However, these regulations must take into account existing rules on international trade as established through the World Trade Organization. There is a general need to raise consumer awareness of the implications of their choices upon forests, forest people, wildlife, biodiversity, and climate.

Cross-sector Coordination

The policies and programs of other sector agencies can have a significant impact upon forests. Most prominently, this includes the allocation of land for agricultural and mining concessions; development of roads, dams, or hydroelectric projects; and urban expansion and resettlement programs. Employment, social welfare, and social protection policies may also affect the extent to which people depend on forest resources for their livelihoods and daily needs. The ability of forests to contribute to climate change mitigation and adaptation therefore depends on synergistic approaches in all relevant sectors. Coordination will help ensure the effective development and implementation of policies.

Climate change will likewise affect many sectors. The strategies needed to tackle it must be well prepared, comprehensive, and closely coordinated across sectors and government departments – namely the ministries of forestry, environment, agriculture, and finance. Furthermore some impacts

of climate change will likely transcend administrative boundaries, and effective responses will require coordinated action at regional and international levels.

The Potential Role of the ASFN

The status of social forestry in ASEAN countries varies, with distinct legislation, policies, institutional capacity, and standards of implementation in each country. In some places, social forestry is already well established with the necessary legal, policy, and institutional frameworks to govern the engagement of local people in forest management. In others, these structures and processes – particularly at the local level – need to be further developed and strengthened. The ASFN can help to promote the sharing of social forestry policy, best practice, and information, as well as develop stronger support to in-country focal social forestry institutions. In so doing, it can help all Member Countries to play their part in reducing the level and impact of climate change.

The ASFN can also help to disseminate the evolving body of knowledge of REDD+ gained from pilot project sites across the region. The preparation of documentation (such as publications or films) on best practices; the facilitation of regional learning and sharing events; and study visits for key stakeholders to visit pilot projects in other countries could be key activities to this end.

In light of the need for cross-sector coordination, the ASFN could act as a regional body for coordinating policies and programs with other relevant sector agencies in the ASEAN region. Furthermore, the ASFN could support the capacity building of ASEAN governments in relation to climate change mitigation strategies as well as support further research into the potential of social forestry to contribute to climate change adaptation in the region.

Country Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

Country	Strengths	Weaknesses	Opportunities	Threats
Cambodia	• Legal framework for social forestry in place • Indigenous rights to access land and forest enshrined in law • High-level commitment to REDD+ • Promising lessons from pilot projects • Funding from UN-REDD	• High rate of deforestation • Weak governance • Conflicting land-use policies, such as ELCs • Weak enforcement and implementation of forest laws and indigenous rights	• Lesson learning and scaling up of REDD+ pilot projects • Social forestry for greater resilience to climate change at local level	• Financial gains from ELCs and timber outweigh potential benefits from REDD+
Indonesia	• Large amounts of forest remaining • Experience with a variety of community forestry projects • High-level commitment to reduce emissions of GHGs • Engaged in UN-REDD, FCPF, FIP, and a number of bilateral REDD+ projects	• High rate and extent of deforestation • No single comprehensive national-level framework for social forestry	• Significant potential to reduce GHG emissions from the forestry sector • Potential for lesson leaning through multiple REDD+ programs and pilot projects. • Social forestry for greater resilience to climate change at local level	• Financial gains from timber, oil palm, and pulp and paper outweigh potential benefits from REDD+
Lao PDR	• Large areas of forest remaining • Legal framework for social forestry in place	• High rate of deforestation • Centralized government • Weak capacity of local government for social forestry	• Social forestry for greater resilience to climate change at local level	• Demand for timber from neighboring countries outweighs potential benefits of REDD+
Malaysia	• Large areas of forest remaining • Strong State forest institutions and Government capacity	• No national framework for social forestry • Indigenous land rights not sufficiently protected under State law	• Social forestry for greater resilience to climate change at local level	• Financial gains from palm oil and timber outweigh potential benefits from REDD+

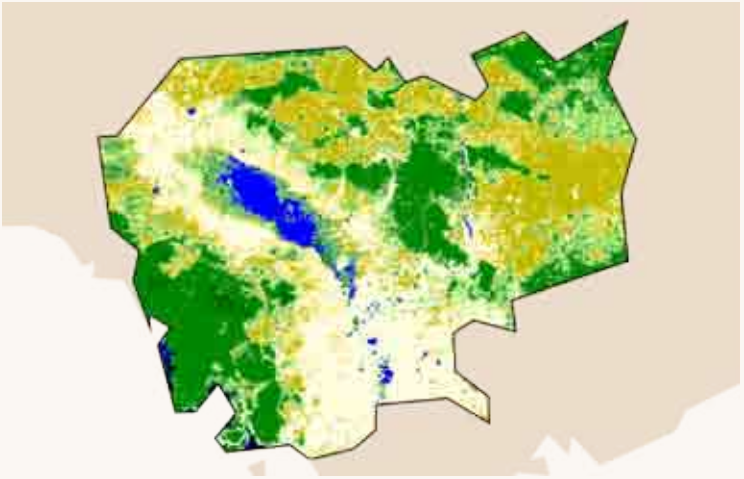
Country	Strengths	Weaknesses	Opportunities	Threats
Myanmar	• History of social forestry – taungya system • Legal framework for social forestry in place	• High rate and extent of deforestation • Centralized government system • Weak civil society	• Social forestry for greater resilience to climate change at local level	• Highly centralized government struggles to decentralize social forestry
Philippines	• Legal and institutional framework for social forestry • Strong governance • Robust civil society with understanding and capacity on REDD+ • Funding from UN-REDD Programme	• History of fluctuating forestry policy and consequent lack of local confidence in social forestry measures	• Social forestry for greater resilience to climate change at local level • Indigenous Peoples Rights Act in place	• Government's economic agenda in the mining sector makes REDD+ implementation a challenge • Agro-industry expansion
Thailand	• Government commitment to preventing deforestation and forest degradation	• Community Forest Bill not yet in place • Indigenous land rights not fully recognized by the State	• Social forestry for greater resilience to climate change at local level	• Need to balance conflicting demands for conservation and social forestry/livelihoods
Vietnam	• UN-REDD Programme partner country • Pilot projects • Initiated a consultation process for FPIC	• Limited government capacity for climate change mitigation and adaptation at local level	• Lesson learning from FPIC process that can be shared with other countries • Social forestry for greater resilience to climate change at local level	• Furniture industry requires a large timber supply, often coming from Myanmar, Lao PDR, and other countries • Investment for agriculture development


ASEAN
Member
States
Myanmar
Thailand
Lao PDR
Cambodia
Vietnam
Philippines
Brunei
Malaysia
Singapore
Indonesia

Section 3

Country Summaries

Cambodia



Key Statistics: The Kingdom of Cambodia	
Total population	14,805,358 in 2009*
Rural population	11,521,529 in 2009* 78% of total population
Total land area (excluding inland water bodies)	17,652,000 ha
Total forested area	10,094, 000 ha 57 % of total land area
Production Forest	3,374,000 ha 33% of total forest area
Protected forest – soil and water	551,000 ha 5% of total forest area
Protected forest – biodiversity conservation	3,985,000 ha 39% of total forest area
Forest under community management	Total: 420 sites covering 383,877 ha Legal: 94 sites covering 113,544 ha (Blomley *et al* 2010)
Carbon stocks	In above- and belowground living biomass: 464Mt In litter: data not available In soil: 384 million tonnes
Rates of deforestation (natural forest)	-144,000 ha per year from 2005-2010 -1.26% per year from 2005-2010#
Social/community forestry programs/activities	• Community Forestry under the Ministry of Agriculture, Forestry and Fisheries (MAFF) • Community Protected Areas (CPAs) under the Ministry of Environment (MoE) • Community Fisheries under MAFF
Climate change citigation programs/ activities	• UN-REDD Programme partner country • 2 REDD pilot projects • 4 CDM projects (non-forestry)
Climate change adaptation programs/activities	NAPA, 2006

Map Source: Stibig, Beuchle, and Janvier, 2000.
Source: FAO Global Forest Resources Assessment 2010: Cambodia (unless otherwise stated)
* World Bank indicators: see http://data.worldbank.org/indicator/
# See http://rainforests.mongabay.com/deforestation/2000/Cambodia.htm

Social Forestry

Background

The Kingdom of Cambodia is recovering from almost three decades of civil war and social upheaval. In recent years, economic growth has led to substantial reductions in overall poverty, but the country remains one of the poorest in the ASEAN region. In Cambodia, 34% of the population lives on less than US$1 per day and 78% live on less than US$2 per day (Wingqvist 2009). The country has a large rural population, and rural poverty is particularly high. Corruption, abuse of power, and weak governance pose major challenges to economic growth, poverty reduction, and sustainable management of natural resources.

Cambodia's forests cover about 10 mha and contain biologically diverse ecosystems and cultural heritage. Forests play an important role in meeting the subsistence and income needs of many rural households, who are particularly dependent on the extraction, consumption, and sale of NTFPs. A study of rural households in forested areas in four Cambodian provinces indicates that up to 41% of rural households derive between 20-50% of their total livelihood value from forests, and almost 15% of households derive more than half of their total livelihood value from NTFPs. (Heov *et al.* 2006).

Cambodia has a high rate of deforestation. In 1969, 70% of the country was covered with primary rainforest – a figure that dropped to 31% in less than 40 years (FAO 2007). The Khmer Rouge abolished private landownership and plundered the country's natural resources, using revenue from forest exploitation to finance their activities (RECOFTC and The Learning Institute 2010). Cambodia's recent economic growth has drawn heavily on its natural resources, particularly forests. Commercial logging reportedly generated US$2.5 billion in timber exports between 1991 and 1998 (Luttrell and Brown 2006). Investment in large-scale agriculture and rubber plantations has also expanded rapidly in recent years. But this growth has come at a price. Cambodia lost around 25,000 km^2 of forest between 1990 and 2005 – 3,340 km^2 of which were primary forest (FAO 2007). Recognizing that unsustainable exploitation of the country's forests may jeopardize long-term economic growth and poverty reduction, the Royal Government of Cambodia declared a logging moratorium in 2002 and has pledged to retain 60% of the country's forest cover.

Despite the logging ban, Cambodia' forests are still under pressure. Most of the rural poor rely on forest resources for much of their income and livelihood. Population growth, rising unemployment, urban and agricultural development, internal migration, greater accessibility to remote areas, corruption, poor governance, and weakly enforced regulations all play their part in perpetuating this pressure.

Mechanisms to conserve the country's remaining forest resources are urgently needed. In the last decade, the Government – with support from international donors and NGOs – has developed comprehensive policy reforms, legal frameworks, and guidelines for the forestry sector to promote SFM. Community management of forest resources is a key part of the Government's strategy for poverty alleviation and SFM.

Definition of Social Forestry (or Equivalent Terms)

According to the Forestry Law (2002), all forested lands are part of the Permanent Forest Estate and are classified as either permanent, protected or private forests. Permanent forests are further divided into production forests, protection forests, and conversion forests – and are under the jurisdiction of the MAFF. Protected areas are under the jurisdiction of the MoE, while private forests are managed by the title holders of the land. The Forestry Law adopts a participatory approach to forest management, promoting the involvement of local communities in decision-making and benefit-sharing (RECOFTC and the Learning Institute 2010).

There are three main systems of CBFM, depending on the forest type.

- Community Forestry under the MAFF makes up 70% of CBFM. It has been prioritized as a method of decentralization and poverty alleviation.
- Community Protected Areas (CPAs) are under the jurisdiction of the MoE for community management of forest resources within protected areas.
- Community Fisheries under the jurisdiction of the MAFF's Fishery Administration cover flooded forests and mangroves outside protected areas.

In addition to these models, there are other decentralized forest management models being piloted under the Community Forestry Program of the National Forestry Program (NFP). These include Community-based Production Forestry, which focuses on SFM and timber utilization; Partnership Forestry in which management is carried out by the commune council, rather than the Community Forestry Management Committee; and Community Conservation Forestry which decentralizes the management of protected forests like sacred forests and botanical gardens. These new mechanisms represent the adaptation of CBFM schemes to meet the specific needs forest-dependent communities.

Status of Social Forestry in National Policy

Upland indigenous communities have informally practiced community forestry in Cambodia for decades. In the 1990s, externally funded projects helped to officially introduce the concept. Consistent with the Government's strategic goals of poverty reduction, decentralized government, and improved environmental management, community forestry is now embedded in national policy, legislation, and programs. These include the Forestry Law (2002), National Poverty Reduction Strategy (2002), Community Forestry Sub-Decree (2003), Rectangular Strategy (2004, revised in 2008), MAFF Guidelines (*Prakas*) on Community Forestry (2006), and the Community Forestry Program under the NFP (2010).

The Forestry Law of 2002 provides the legal framework for the forestry sector. It aims to ensure sustainable management of the country's forests for their social, economic, and environmental benefits, including conservation of biological diversity and cultural heritage. The Law officially recognizes community forestry and permits the Forestry Administration to place areas of forest

within the Permanent Forest Reserve under community management through renewable 15-year agreements.

The 2010 approval of the NFP for 2010-2030 paved the way for legal and policy reforms in the forestry sector. In recognition of forests essential contribution to national development, the NFP emphasizes the importance of good governance and promotes SFM. The NFP furthermore identifies community forestry and climate change adaptation and mitigation as strategic activities and objectives.

Trends in Social Forestry

Despite growing commitment from the Government and support from donors and NGOs, CBFM in Cambodia is still in its early stages and faces many challenges.

Community forestry guidelines were issued in 2006, creating a process by which communities could legally register their community forests. Estimates on the extent of community forestry vary from 280 to 432 communities, covering between 220,000 and 383,877 ha (Vickers *et al.* 2010; RECOFTC and the Learning Institute 2010). However, a recent report found that only 94 sites covering 113,544 ha are legally recognized (Blomley *et al.* 2010). By 2030, the NFP aims to increase the number of officially recognized communities with Community Forestry Agreements to 1,000 and to place 2 mha of forests under decentralized forest management (RECOFTC and the Learning Institute 2010).

Most community forestry projects take place in degraded forest areas and focus on providing communities with seedlings for replanting degraded areas. Immediate returns for the communities are limited, and collection of NTFPs such as mushrooms, honey, bushmeat, resins, and rattan is the main contributor to livelihoods. Overuse of forest resources and ongoing illegal activities – such as harvesting of timber, illicit NTFP collection, and land-use change – are still common and result in further degradation of forests. This can discourage others from practicing sustainable forest uses.

Establishing an official community forestry project is costly and time-consuming, requiring significant legal and technical knowledge. The ability of local communities to understand, manage, implement, and monitor community forestry is weak; and the capacity of the Forestry Administration and local government staff to support community forestry managers is limited. The result is a heavy dependence upon external support and funding from donors and NGOs (RECOFTC and the Learning Institute 2010).

Since the 1990s the Government has issued a number of ELCs to private companies to develop large-scale agriculture and plantations with the aim of attracting investment, earning export revenue, and creating rural employment. As of April 2010, it had issued 85 contracts covering almost 1 million ha. Many concessions have been allocated in forested areas, highlighting a lack of coherence in rural land management policies. Furthermore, many ELCs have been granted in contravention of Cambodian law relating to the size of concessions, the type of land allocated, and the requirement to carry out public consultations and environmental and social impact assessments. Indigenous communities' rights to collective ownership of land are protected under the Cambodian Land Law of 2001. However concessions have been allocated on land used by rural and indigenous communities

for small-scale agriculture and collection of NTFPs. Lack of policy implementation and poor law enforcement have led to frequent violations of the law and left indigenous people vulnerable to exploitation by powerful commercial and State interests. Communities are often denied access to the land, forests, and fisheries they rely on for their livelihoods and their spiritual beliefs (UN OHCR 2007). Instead of promoting rural development and poverty reduction, ELCs have adversely affected the rights and livelihoods of rural communities, and pose a significant risk to implementation of community forestry and REDD+.

The recent Government approval of a titanium mine in the forest of the Cardamom Mountains – an area of outstanding national, regional, and global importance for biodiversity conservation – raises new concerns for local communities, wildlife conservation, watershed protection, and SFM practices.

Institutions Involved in Social Forestry

The Forestry Administration under the MAFF is responsible for managing the Permanent Forest Reserve in accordance with the Forestry Law and the National Forest Sector Policy. It is responsible for managing concessions and community forestry projects, supporting traditional user rights, wildlife management, and addressing forest crimes (RECOFTC and the Learning Institute 2010).

In 2007 the Forestry Administration established the National Community Forestry Program Coordination Committee under the NFP. The Committee coordinates activities of the Forestry Administration, Government agencies, international organizations, and NGOs in the establishment, development, and implementation of community forestry in Cambodia. It reports to the Technical Working Group on Forestry and Environment, and serves as the focal point for ASFN activities.

Climate Change Mitigation and Adaptation

Background

Cambodia's agriculture- and natural resource-based economy is vulnerable to the impacts of climate change. Deforestation, loss of mangrove forests, land degradation, and loss of habitat and biodiversity are likely to increase with climate change. More forest fires, pests, diseases, and invasive species are also likely. Coastal areas may experience sea-level rise as weather patterns change, causing major impacts on agriculture, infrastructure, and fisheries, particularly in the Tonle Sap Basin (MAFF 2010). The effects of climate change will be felt hardest by Cambodia's poor and marginalized people, as their lack of resources limits their resilience and ability to adapt.

REDD+ Strategy Development

The NFP recognizes that climate change will impact forests and agriculture, and that mitigation and adaptation strategies are vital to sustain ecologically sound natural forests for production, livelihoods, and environmental services. The NFP highlights REDD and the CDM as the key mechanisms for

reducing the impacts of climate change. Cambodia is engaged in the FCPF and receives funding from the UN-REDD Programme.

In January 2010 the Government created an inter-ministerial REDD+ Taskforce to develop a REDD+ Roadmap for Cambodia. The Roadmap outlines a comprehensive plan for moving forward with REDD+. It highlights that REDD+ Readiness should aim to build national capacity and greater understanding of REDD+; support existing policies and strategies for forest management; avoid unnecessary creation of new institutions and coordination mechanisms; seek sustainable finance for implementation and scaling-up; raise awareness; and adopt a 'learning by doing' approach. In November 2010 Cambodia presented a proposal for REDD+ Readiness funding to the UN-REDD Programme's Policy Board in Washington, DC, and was granted US$3 million in REDD+ funding.[14]

The first REDD+ project in Cambodia was initiated by a coalition of organizations including Community Forestry International, Pact Cambodia and Terra Global Capital in Oddar Meanchey Province. The project supported the Forestry Administration and 13 community forestry groups to protect and manage 67,783 ha of forestland with a view to establishing a functional financing mechanism (Blomley *et al.* 2010) that could potentially sequester 7.1 million tonnes of carbon, generate financial returns for the participating communities, and act as a model for replication and scaling-up of REDD+ in Cambodia (Bradley 2009). A second pilot project is under development in the Seima Protection Forest with support from the WCS.

National Climate Change Mitigation Activities

According to Cambodia's Initial National Communication, the forestry sector is the source of 97% of all CO_2 emissions in Cambodia. A 2003 assessment of GHG mitigation options in the forestry, agriculture, and waste sectors recognized that the forestry sector contributes to both the increase and decrease of the concentration of GHGs in the atmosphere. It assessed the potential and existing barriers for forestry sector strategies, such as forest protection and management and carbon sink enhancement, to contribute towards GHG mitigation in Cambodia (MoE/UNDP 2003).

The Cambodian Millennium Development Goal aims to achieve forest cover of 60% of total land area by 2015. Despite this aim, forest cover has continued to decline in recent years from 59% in 2006 to 57% in 2010 (Forest Administration 2010; FAO 2010).

A recent paper identified a range of drivers of deforestation in Cambodia, including the actions of military personnel and local government officials, illegal logging, agricultural expansion, ELCs, forest fires, and fuelwood collection. It identified mitigation strategies for each driver based on experience gained from the Oddar Meanchey REDD+ pilot project (Poffenberger 2009).

[14] http://www.un-redd.org/PolicyBoard/tabid/588/Default.aspx accessed on 30 November 2010.

National Climate Change Adaptation Activities

Cambodia's NAPA was finalized in 2006. It identifies agriculture, forestry, human health, and the coastal zone as national priority areas for climate change adaptation and outlines 39 projects associated with climate-related hazards.

Other Climate Change Projects and Programs

Cambodia ratified the UNFCCC in December 1995 and acceded to the Kyoto Protocol in July 2002. The MoE is the National Focal Point for the UNFCCC and the Kyoto Protocol. Cambodia has established institutional procedures to host projects under the CDM. As of August 2009, six CDM projects had been approved by the MoE – four of which have been ratified by the CDM Executive Board. Cambodia is consequently one of the leading LDC countries in CDM project implementation (MAFF 2010).

Cambodia has limited experience in Payments for Environmental Services (PES) with local communities. Although there are some pilot ecotourism projects and other payment programs in progress, more work is needed to understand how PES schemes could develop (MAFF 2010).

Institutions Involved in Climate Change

The Forestry Administration is responsible for the national development of REDD+ and is currently implementing the country's first REDD+ project in Oddar Meanchey.

The Cambodian Climate Change Office, established under the MoE in June 2003, works closely with Government agencies, NGOs, the private sector, local communities, and international agencies to coordinate and implement national climate change policies as well as mitigation and adaptation activities.

The National Climate Change Committee, established in April 2006, is a high-level inter-ministerial body that prepares, coordinates, and monitors Government policies, strategies, plans, and programs to address climate change issues in Cambodia.

The National Climate Change Network brings together 40-60 members from climate change NGOs and civil society organizations. Community forestry groups include the National Community Forestry Program Coordination Committee, the Forum Forestry Network, and regional/provincial and local networks in areas with REDD projects.

Conclusion

There are considerable opportunities for participatory SFM to contribute to economic development, poverty reduction, and climate change mitigation and adaptation in Cambodia. The Government has begun the process of piloting REDD+ projects in the country and establishing governance frameworks

to support them. However, the design and implementation of benefit-sharing arrangements for these projects require further study (Oberndorf 2010).

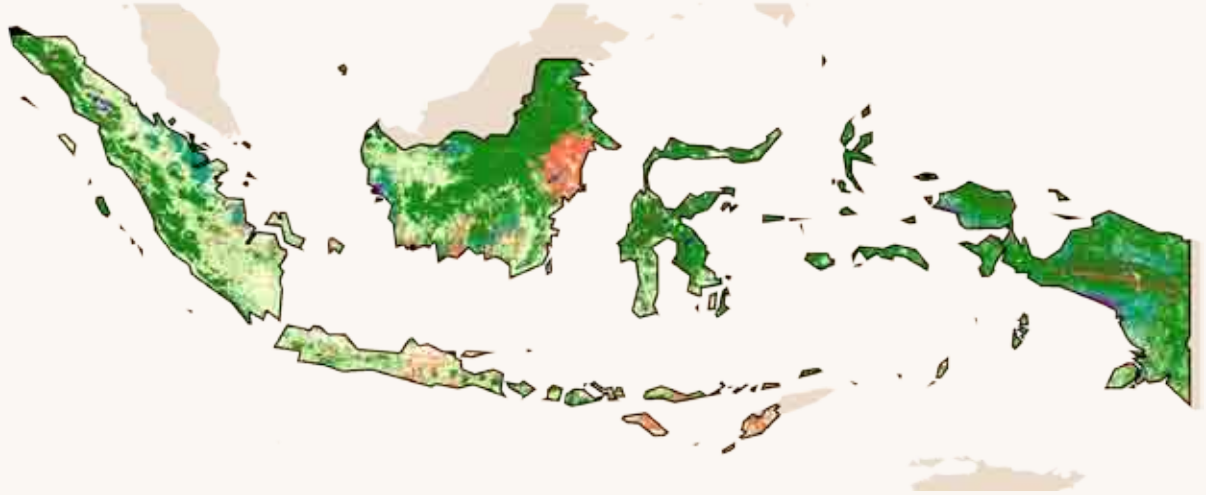
The Government should continue to comply with existing policies, laws, and regulations relating to REDD+. Moving forward, the Government should take stock of lessons learned from REDD+ pilot activities and design a national REDD+ framework that is appropriate for the Cambodian context. This could include development of a REDD+ implementation policy and a REDD+ sub-decree, which would clarify issues relating to ownership of forest carbon stored and future benefit-sharing mechanisms.

Various challenges still need to be overcome, such as improving forest governance and law enforcement; securing land tenure and the rights of local and indigenous people; managing overlapping land uses; and strengthening the capacity of both the Government and communities for SFM. The Government has recognized that governance is a key issue that must be addressed and is taking promising steps to this end. It is focusing on improving:

- Credibility and transparency in the forestry sector;
- Forestry legislation and law enforcement at all levels and for all groups and individuals, through prevention of and action against forest crime;
- Participatory and consultative processes and the participation of stakeholders;
- Collaboration and dialogue with stakeholders from all parts of society;
- Capacity building;
- Conflict management;
- Benefit-sharing for forest-dependent people; and
- Adoption of pro-poor management systems.

Key challenges for community forestry and REDD+ include securing local peoples' access rights to land and forests and developing mechanisms to ensure that benefits from REDD+ are shared equitably among stakeholders. The existing community forestry and CPA modalities need to be scaled up and become more accessible if they are to be a realistic strategy for widespread community forestry management. Furthermore, the capacity of both Government and community forestry groups to manage community forestry and CPA areas needs improvement, particularly with regard to REDD+ implementation.

Indonesia



Key Statistics: Republic of Indonesia	
Total population	229,964,723 in 2009 (World Bank*)
Rural population	109,049,272 in 2009 (World Bank*) 47% of total population
Total land area (excluding inland water bodies)	181,157,000 ha
Total forested area	94,432,000 ha [15] 52% of total land area
Production forest	49,680,000 ha (53%) of forestland
Protected forest – soil and water	22,667,000 ha 24% of total forest area
Protected forest – biodiversity conservation	15,144,000 ha 16% of total forest area
Forest under community management	33,000 ha 0.00035% of total forested area [16]
Carbon stocks	In above- belowground living biomass: 13,017 million tonnes In litter: data not available In soil: data not available
Rates of deforestation (natural forest)	Average -485,000 ha per year (2005-2010) Average -0.51% per year (2005-2010) #

Key Statistics: Republic of Indonesia	
Social/community forestry programs/activities	• *Hutan Kemasyarakatan*/HKm (community-based forest) • *Hutan Desa* (village forest) • *Hutan Tanaman Rakyat*/HTR (community-based forest estate) • *Kemitraan* (Partnership) • *Kawasan Dengan Tujuan Istimewa/KDTI (*special purpose zones*)* • *Pengelolaan Hutan bersama Masyarakat*/PHBM (managing forests with local communities) • *Model Desa Konservasi* (conservation village model) • *Hutan Rakyat*/private community-forestry income generation; • *Hutan Adat* (customary forest) • *Sistem Hutan Kerakyatan*/SHK (community-based forest system)
Climate change mitigation programs/activities	• UN-REDD Programme partner country, also with the FCPF and the FIP • 63 CDM projects (none in afforestation/reforestation) registered by the Executive Board of the CDM with a potential to produce 13 million tonnes of CO2 equivalent. • More than a dozen bilateral and multilateral partnerships for REDD Readiness, including the United States Agency for International Development, the Norwegian Government, the German Technical Agency for Cooperation (GIZ), and the Korea International Cooperation Agency. Examples of ongoing projects include: The Kalimantan Forests and Climate Partnership (KFCP); the Indonesia-Norway Letter of Intent on reducing GHGs from deforestation and degradation; and the Berau Forest Carbon Programme.
Climate change adaptation programs/activities	• National Action Plan Addressing Climate Change (RANPI) 2007 • Indonesia Climate Change Sectoral Roadmap 2010

Map Source: Stibig, Beuchle, and Janvier, 2000.
Source: FAO Global Forest Resources Assessment 2010: Indonesia (unless otherwise stated)
* World Bank indicators: see http://data.worldbank.org/indicator/
# See http://rainforests.mongabay.com/deforestation/2000/Indonesia.htm

Social Forestry

Background

Indonesia has some of the most biologically diverse tropical forests in the world. They are the largest remaining area of contiguous tropical forests in Asia and the third-largest in the world. Indonesia covers just over 1% of the Earth's land surface but is home to 11% of the world's plant species, 10% of all mammals, and 16% of all birdlife (BlueGreen Alliance 2010). Millions of Indonesians depend directly on these forests for their livelihoods, either from collection of forest products or working in the wood-processing industry.

[15] Alternative figures provided by the Directorate-General of Forestry Planning, Ministry of Forestry are as follows: Forest Area: 136.9 million ha; Protected Forest (Hutan Lindung) 31.6 million ha; Limited Production Forest (Hutan Produksi Terbatas): 22.3 million ha; Production Forest (Hutan Produksi): 36.7 million ha; Convertible Production Forest (Hutan Produksi yang dapat dikonversi): 22.8 million ha; Conservation Forest (Hutan Konservasi): 23.5 million ha. Personal communication, February 2011.

[16] FAO data indicates that communities have management rights over 3,300 hectares of public forest (FAO 2010). However the Asia Forest Network website suggests there may be 590,000 hectares of forest under CFM which translates to 0.01% of total forest area. http://www.asiaforestnetwork.org/prog_cfm_indonesia.html accessed on 22 November 2010.

However Indonesia's forests are some of the most threatened and are disappearing at an alarming rate. Indonesia is the world's largest exporter of tropical timber, the biggest producer of palm oil, and has a large domestic pulp and paper industry. Exploitation of forests for timber and raw materials, and clearance of forests to make way for industrial plantations and mining are major contributors to deforestation. The area of oil-palm plantations rose from 103,600 ha in 1973 to over 3 mha in 2003 (Brown and Jacobson 2005). From 1990 to 2005, approximately 28 mha of Indonesian forest disappeared, 78% of which was estimated to be virgin forest.[17] Deforestation on such an enormous scale has made Indonesia one of the world's largest emitters of GHGs.

Much of the forest clearance in Indonesia is believed to be illegal. In the 1990s, Indonesia lost an estimated 2 mha of forest per year to illegal logging and land conversion (FWI/GFW 2002). Up to 70% of timber harvested may be illegal, resulting in annual losses of Government revenue of around US$1 billion.[18] Corruption in the Government, military, and police have allowed the mismanagement of concessions and illegal exploitation of forests to continue with little regard for long-term sustainability, environmental concerns or the rights and welfare of local people.

Definition of Social Forestry (or Equivalent Terms)

The terms 'social forestry' and 'community forestry' have been used in different contexts in Indonesia. Up to 10 different forms of community engagement in forests have been delineated (Siscawati and Zakaria 2010):

- *Hutan Kemasyarakatan*/HKm (community-based forest): Government-sponsored initiatives that engage local communities in forest management or rehabilitation of State forestland.
- *Hutan Desa* (village forest): management and protection of State production forests by village institutions that are not managed by logging companies, or protection forests that are not managed by Government agencies.
- *Hutan Tanaman Rakyat*/HTR (community-based forest estate): establishment of community-based timber plantations to supply materials for pulp and paper industries.
- *Kemitraan:* partnership between State-owned and private companies and local communities for collaboration in forest management.
- *Pengelolaan Hutan bersama Masyarakat*/PHBM (managing forests with local communities): engagement of local communities in cultivating timber seedlings and managing young trees (for Perhutani – a large State forestry company in Java).
- *Model Desa Konservasi* (conservation village model): participatory management of conservation areas with existing resident communities.
- *Hutan Rakyat:* privately-owned community forestry income generation.

[17] www.illegal-logging.info/approach.php?a_id=85 accessed on 30 November 2010.
[18] *Ibid*.

- *Hutan Adat* (customary forest): use of State land for socio-cultural, spiritual, ecological, and economic purposes at communal and household levels.
- *Kawasan Dengan Tujuan Istimewa/KDTI* (special purpose zones): forest areas that have specific purposes such as watershed protection, forest conservation, and education or research. No social forestry activities have yet been implemented under this mechanism.
- *Sistem Hutan Kerakyatan*/SHK (community-based forest system): a range of community-based forest resource management models initiated by indigenous peoples and local communities living in or around forest areas. These systems are developed on the basis of traditional knowledge, local ecological resources, and the socio-cultural system of the community, but have no legal or policy basis (Siscawati and Zakaria 2010).[19]

Status of Social Forestry in National Policy

According to the Basic Forest Law of 1999, the State has sole authority over all forestlands in Indonesia – regardless of whether they are on public, private or customary land. Forest ownership can be temporarily reassigned as timber concessions known as Forest Exploitation Rights (*Hak Pengusahaan Hutan)*. Indigenous groups may be permitted to inhabit their traditional lands and continue customary practices at the discretion of the State.

- The National Forest Policy (1988) mentions community rights in forestlands.
- MoF Decree No. 691 of 1991 and No. 69 of 1995 introduced *Pembinaan Masyarakat Desa Hutan* or the Community Development Program and required concession holders to support the socio-economic needs of communities living in and around their concessions.
- MoF Decree No. 622/Kpts-II/1995 gives local people rights to use NTFPs and supports the development of a community's capacity and rights in the management of forest resources as a long-term objective.
- The Ministerial Decree on CFM (No. 699/1998) grants communities forest management leases.
- The Basic Law on Regional Autonomy (No. 22/1999) decentralizes several State functions and 80% of income from resources to district governments.
- The Basic Forestry Law (No. 41/1999) gives district heads the authority to allocate 100-ha logging licences but retains the right to decide the use of the forest estate.

[19] With regard to implementation of SHK: various forms of forest management have been initiated by local communities and facilitated by NGOs, based on local wisdom and culture in preserving forest sustainability and improving community welfare. These include but are not limited to: *tembawang, simpunk*, in Kalimantan, *lembang* in Tana Toraja, *talun* in West Java, *repong* in Lampung, and family forest (*Hutan Keluarga*) in Flores. All of these approaches have been identified and recognized by respective Ministry of Forestry (MoF) line agencies as terminology used by local communities for CBFM. Such schemes as stipulated in the Government Law (Undang-Undang No. 41) on Community Forest and Village Forest have been developed for the purpose of administration and legality procedures. In this regard one Community Forest (HKm) may be managed by the *tembawang* mechanism well known by the local community, provided that the mechanism aims at SFM and ensures the ecological, economic, and social functions of forests.

- The Agrarian Ministry Decree (1999) admits the possibility of collective user rights and district-level decrees.
- The Forest Ministry Decree (No. 31/2001) on Administration of Community Forestry allows district authorities to issue user rights to communities, providing the area is not under other forms of licence or utilization rights.
- In 2003 the Regulation of the Minister of Forestry, No.1 /Menhut-II/2004 aimed to promote the empowerment of local people in the implementation of social forestry for poverty reduction and forest preservation.
- Ministerial Regulation No. 37 (2007) provides the legal basis for Community Forest (HKm) in which certain areas of forests can be allocated for communities to improve their livelihoods through harvesting of NTFPs. Timber harvesting is only permitted if communities develop plantations in degraded forest areas.
- Ministerial Regulation No. 49 (2008) provides the legal basis for the expansion of Village Forest to provide more prosperity to villages. In Village Forests communities can manage both timber and NTFPs.

Trends in Social Forestry

Social forestry in Indonesia has evolved over the last 30 years. In the early 1980s, the MoF introduced the *taungya* social forestry system in a State-owned teak forest plantation (Perum Perhutani) in Java. In the 1990s, the MoF introduced a series of decrees to grant communities living in and around forest areas access to forest resources and to obligate concession holders to support improvements in their forest management capacity and socio-economic development (Hindra 2005).

Since 1998, Government attention focused on social forestry approaches engaging local people in the management of State- or private-run plantations. Such engagement gave local people an opportunity to become the main actors in efforts to increase local welfare and preserve the forest. In 2004 the MoF promulgated five key policies, one of which was to empower communities living in and around forest areas. It required forest concession holders to cooperate with local community groups surrounding the forest; take a participatory approach to forest and land rehabilitation to empower communities surrounding the forest; and consider community needs in forest resource management.

In 2007, the passage of Government Regulation No. 34/2002 facilitated local community empowerment through capacity building, enterprise development, transfer of technology, education and training, and market access through three schemes: HKm; *Hutan Desa*; and *Kemitraan* (see Definition of Social Forestry section). As of December 2010, 30,331.55 ha of land had been allocated as HKm and 10,310 ha as *Hutan Desa*. Indonesia has set a target to allocate 2.5 mha of forestland as Community Forest and Village Forest by 2014.[20]

[20] Personal communication, Directorate of Social Forestry Development, Directorate-General of Watershed Management and Social Forestry Development, MoFRI, December 2010.

Institutions Involved in Social Forestry

The MoF is responsible for managing the nation's forests. It has five functions: forest utilization, reforestation and land rehabilitation, forest protection and nature conservation, forest inventory and land-use planning, and forest research and development.

The Directorate General of Watershed Management and Social Forestry Development oversees community forestry development.

Provincial and district government authorities have significant responsibilities for forest management, excluding national parks and protected areas.

Various civil society groups are active in areas relating to social forestry, environment issues, and local communities. The Indonesia Communication Forum on Community Forestry (FKKM) is a network with 15 working groups in different regions of the country to raise awareness, disseminate information, engage in policy dialogue, and conduct research. Its members come from universities, research institutes, the Ministry of Forestry, forest companies, NGOs, indigenous peoples, and local communities. National-level groups include the Consortium for Supporting Community-based Forest System Management (KpSHK), WALHI, the Indonesian Friends of the Earth forum representing 500 NGOs, and the Indigenous People's Alliance (AMAN). The World Agroforestry Centre (ICRAF), the Ford Foundation, RECOFTC, GIZ, and the Center for International Forestry Research (CIFOR) are among international organizations actively supporting social forestry in Indonesia.

Climate Change Mitigation and Adaptation

Background

Indonesia's forests contain significant amounts of biomass – more than any other country in the ASEAN region – and store an estimated 3.5 million tonnes of carbon (FWI/GFW 2002). Due to its high rates of deforestation, Indonesia is one of the world's largest emitters of GHGs. In 2007 Indonesia was ranked as the world's third largest emitter, after the United States and China (World Bank 2007). According to the Rainforest Action Network, emissions from deforestation in Indonesia account for 5% of all global emissions. Indonesia will therefore be a critical country in emission reduction efforts. With 17,500 islands and 80,000 km of coastline, Indonesia is also highly vulnerable to the impacts of climate change. Almost half of Indonesia's population of some 110 million people lives in low-lying coastal areas. The socio-economic impact of sea-level rise could be devastating, with effects on marine and tourism industries as well as on mangrove forests and coral reefs. Other likely impacts include changes in rainfall patterns, more frequent and severe storms, flooding, forest fires, loss of marine and terrestrial biodiversity, and more droughts resulting in water shortages and lower agricultural production, as well as detrimental impacts on human health.

The Indonesian Government has committed to substantial reductions in carbon emissions by 2020, i.e. 26% from Business as Usual (BAU) using its own resources and 41% with additional support from the international community. Indonesia played a key role in the international climate negotiations

leading up to the COP15 conference in Copenhagen, hosted the 2007 climate conference which developed the Bali Roadmap, and initiated the first international meeting of finance ministers on climate change.

REDD+ Strategy Development

At the time of writing, Indonesia is in the process of finalizing its National Strategy on REDD+. This strategy comprises three main elements: problem identification in REDD+, challenges and opportunities in REDD+ implementation, and key strategies to achieve the national emission reduction target of 26% by 2020 compared to 2009 levels (or 41% with international support, see below). The MoF has issued a Ministerial Decrees No. 30/2009 and No. 36/2009 on REDD+ regulation. Provincial and district governments have also shown interest in REDD+.

Indonesia is participating in a number of REDD+ initiatives:

Indonesia is a partner in the World Bank Forest Carbon Partnership Facility. It launched its Readiness Preparation Process in 2009 and is implementing its readiness planning with UN-REDD (US$7 million combined Swiss State Secretariat for Economic Affairs [SECO] basket funding). It is developing its R-PLAN, and various drafts have been submitted to the FCPF. The R-PLAN's estimate for the cost of investment and capacity building requirements is US$4.5 million.

Indonesia is one of the partner countries under the UN-REDD+ Programme. The UN-REDD Programme has approved Indonesia's proposal and granted a budget of US$5,644,250 for Phase One. UN-REDD Indonesia is currently collaborating with The National Development Planning Agency (BAPPENAS) to develop the National REDD+ Strategy through a process of multi-stakeholder consultation. The Strategy outlines key activities required at national, district, and provincial levels to develop the necessary systems and structures to effectively implement REDD+. Several activities have been conducted, including a series of focus group discussions and consultations, although there are some concerns regarding the consultation process and the level of involvement of civil society organizations and indigenous peoples. UN-REDD Indonesia has identified the island of Sulawesi as its focal area. It is currently concentrating on establishing MRV and supporting REDD+ national strategy development.

Indonesia is also one of the eight pilot countries in the World Bank's FIP, which could provide a budget of up to US$70-80 million for REDD+. Indonesia was initiating planning activities at the end of 2010.

National Climate Change Mitigation Activities

At the 2009 G20 meeting, President Yudhoyono pledged that Indonesia would work to reduce its carbon emissions by 26% by 2020 compared to BAU, and by up to 41% with international support (MoF 2009). In the same year the Ministry of Finance published its Green Paper on its Economic and Fiscal Policy Strategies for Climate Change Mitigation outlining the Government's fiscal and economic policies for emissions reductions, carbon finance, and institutional strengthening.

The vast majority of Indonesia's emissions come from deforestation and forest degradation, peat fires, and land-use change. Therefore the bulk of initial emission reductions is expected to come from these sources, including curbing emissions from changing land-use practices, reducing deforestation, promoting reforestation, conserving peatland, and preventing fires. However the level of emissions generated by the energy and transport sectors is also increasing as Indonesia's economy grows. The Green Paper has set out plans for moving towards the implementation of carbon taxes, in parallel with gradual removal of energy subsidies, and the development of low-emissions technology such as geothermal power.

National Climate Change Adaptation Activities

In recent years, much of Indonesia's focus has been on mitigation. In 2007 a Department for International Development (DFID)/World Bank report claimed that Indonesia was not doing enough in climate change adaptation. Indonesia has recognized that the impacts of climate change may hinder progress toward its development goals. In 2007, the RANPI offered guidelines for Government institutions to undertake coordinated adaptation efforts. BAPPENAS has developed the Indonesia Climate Change Sectoral Roadmap 2010 to help mainstream climate change issues into national development planning, such as the Medium Term National Development Plan (RPJMN) 2010-2014.

Other Climate Change Projects and Programs

There are more than 20 climate change/demonstration activities in Indonesia. Some of the main projects are mentioned below, and a comprehensive list is provided in Annex 4.

In May 2010 Indonesia and Norway entered into a partnership under the NICFI to support Indonesia's efforts to reduce GHG emissions from deforestation and degradation of forests and peatlands. Indonesia agreed to suspend new logging concessions for two years in return for US$1 billion over the next six years in support of capacity building to monitor, report, and verify emissions; reduce corruption; and develop enabling policies and institutional reforms. It is hoped the agreement will slow the rate of deforestation caused by the expansion of the oil-palm industry.

The Australian Government funds the Kalimantan Forests and Climate Partnership (KFCP). It is working on a demonstration project to develop an innovative market-oriented approach to develop measures to reduce emissions from deforestation and forest degradation in Central Kalimantan. It aims to prevent the deforestation of up to 70,000 ha of forests and rehabilitate 200,000 ha of degraded peatland. Australia has committed A$30 million to establish the KFCP. The Australian Government is also funding a second demonstration REDD project located in communal forests in Jambi Province, Sumatra, which is currently in its preparatory phase. The Indonesia-Australia Forest Carbon Partnership provides support for the establishment of a Forest Information System and a National Carbon Accounting System (INCAS).

The WWF Heart of Borneo Initiative was initiated in 2007 between Indonesia, Brunei, and Malaysia to sustainably manage 22 mha of forest on the island of Borneo.

The International Tropical Timber Organization (ITTO) and the SECO are co-financing a four-year project in the Meru Betiri National Park in East Java, which aims to enhance forest carbon stocks through enhanced community participation in conservation and management.

Indonesia is also collaborating with the Japan International Cooperation Agency (JICA) to improve Indonesia's MRV system, focusing on improving monitoring and measurement through the use of satellite data to estimate carbon and biomass stocks (Blaser 2010).

Fauna and Flora International's (FFI) is implementing a REDD pilot project in the districts of Ketapang and Kapuas Hulu, West Kalimantan. This project is also supported by the David and Lucile Packard Foundation. FFI is also implementing a project on Reducing Carbon Emissions from Deforestation in the Ulu Masen Ecosystem with support from the Rainforest Alliance and Carbon Conservation International. This project aims to reduce deforestation by 85%, as well as generate revenues for protecting biodiversity and for supporting local communities.

GIZ has pledged €27 million for a demonstration REDD project in three districts in Kalimantan: Kapuas Hulu, Malinau, and Berau. It will operate from January 2010 until 2016. GIZ is also supporting a project in Merang, South Sumatra on forest restoration, integrated peat forest management, and fire control with a total budget of U$$ 1.5 million. The KfW Germany (FORCLIME) project is undertaking district-level demonstration activities covering three districts in Kalimantan: Kapuas Hulu, Malinau, and Berau with a total budget of US$7 million.

The Leuser Ecosystem REDD Project is a 2 mha REDD project in Aceh's Gunung Leuser ecosystem which is operated by Global Eco-Rescue, a private developer, in cooperation with the Government of Aceh.

Institutions Involved in Climate Change

MoFor has been driving the initial REDD+ Readiness process in Indonesia. It has issued four National Regulations on Reducing Emissions from Deforestation and Degradation to guide implementation of national REDD+ policy.

The Indonesia Forest Climate Alliance, established in July 2007, is the Government's Working Group on REDD+. It involves bilateral and multilateral institutions and private sector and civil society organizations. It is a forum for stakeholder communication, coordination, and consultation on REDD+ issues and aims to support development and implementation of an internationally agreed REDD+ mechanism and provide incentives for reducing deforestation.

The Ministerial Decree in 2009 created the National REDD Working Group, which is chaired by the MoF. It consists of representatives from relevant sectors and interested stakeholders, who will oversee REDD+ implementation (Vickers *et al.* 2010).

Conclusion

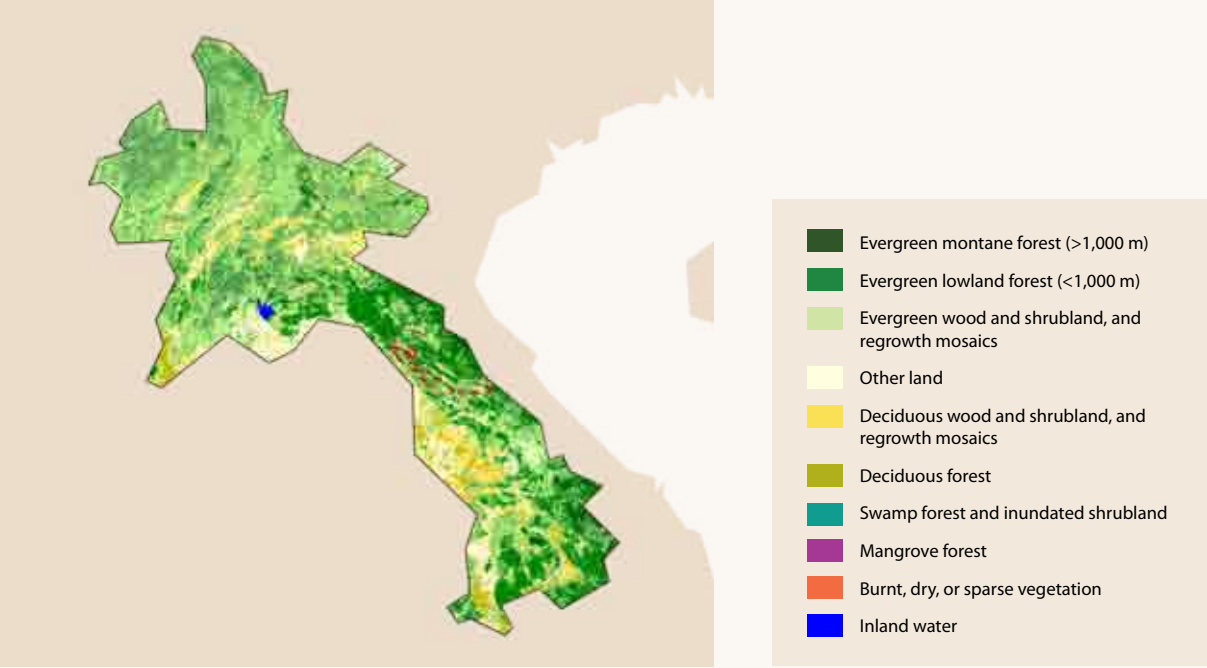
Indonesia is making progress towards climate change mitigation and adaptation. Key documents such as the Green Paper for Climate Change Mitigation, the National Action Plan Addressing Climate Change, and the Indonesia Climate Change Sectoral Roadmap 2010 for Adaptation, provide a good foundation for addressing climate change. Due to Indonesia's decentralized governance system, it will be essential to build capacity at all levels for forest management and implementation of REDD+.

A key challenge in relation to REDD+ will be finding effective mechanisms to ensure that rural communities and indigenous people, who have been so far excluded from the benefits of forest exploitation in Indonesia, are able to participate in development and implementation of REDD+ and receive benefits from forest protection. In January 2010, the State Minister for Environment said that at least 20% of revenue from REDD+ should go to indigenous people, who play a crucial role in protecting the forest to avoid emission leakages.[21] Activists have argued that the unclear status of indigenous people and tribal communities in managing forests will impede effective implementation of REDD+ projects. A CIFOR policy brief examined 17 REDD+ pilots under development in Indonesia in mid-2009 and found that many were based on the existing tenure systems and concessions. The report argues that broader policy reform is required if REDD+ projects are to avoid replicating the inequalities and inefficiencies of the existing concession and tenure system (CIFOR 2009).

Indonesia is a critical country for global reduction of GHG emissions and is likely to be severely impacted by the effects of climate change. Its success in implementing effective climate change mitigation and adaptation initiatives will therefore be of great importance. Effective and wide-reaching measures will be needed to improve forest governance and law enforcement to tackle the problem of illegal logging. A key challenge will be whether the financial benefits of REDD+ can outweigh profits from timber harvesting and palm oil production, and provide tenable incentives for forest protection.

[21] The Jakarta Post, 01/29/2010. See http://www.thejakartapost.com/news/2010/01/29/indigenous-people-get-%E2%80%9820%E2%80%99-redd-money.html accessed on 22 November 2010.

Lao PDR



Key Statistics: Lao People's Democratic Republic	
Total population	6,320,429 in 2009 (World Bank*)
Rural population	4,295,363 in 2009 (World Bank*) 68% of total population
Total land area (excluding inland waterbodies)	23,080,000 ha
Total forested area	15,751,000 ha [22] 68% of total land area
Production forest	3,596,000 ha 23% of total forest area
Protected forest – soil and water	9,074,000 ha 58% of total forest area)
Protected forest – biodiversity conservation	3,043,000 ha [23] 19% of total forest area
Forest area under community management	8,210,803 ha [24] 52% of total forest area
Carbon stocks	In above- and belowground living biomass: 1,107 million tonnes In litter: data not available In soil: data not available
Rates of deforestation (natural forest)	Average -91,000 ha per year (2000-2005) [#] Average -0.60% per year (2000-2005) [#]

Key Statistics: Lao People's Democratic Republic	
Social/community forestry programs/activities	• Participatory sustainable forest management • Village forestry • Collaborative forest management • Traditional forest management • Community-based forest management for ecotourism • Smallholder plantations/industrial plantations
Climate change mitigation programs/activities	Potential mechanisms to reduce emissions from the forestry sector include: • Natural regeneration of 6 mha and planting of 500,000 ha (FS2020) • Reductions in illegal logging through improved forest law enforcement • Reductions in shifting cultivation and improvements in agroforestry • Reduction in burning and forest clearance Ongoing pilot projects include: • CLiPAD – avoided deforestation • SUFORD – production forests and carbon financing • WCS project Bolikhamxay Province to reduce deforestation and degradation, conserve biodiversity, improve local livelihoods, and assess options for carbon financing
Climate change adaptation programs/activities	NAPA: 45 project proposals for climate change adaptation focusing on agriculture, forestry, water, and public health

Map Source: Stibig, Beuchle, and Janvier, 2000.
Source: FAO Global Forest Resources Assessment 2010: Lao PDR (unless otherwise stated)
* World Bank indicators: see http://data.worldbank.org/indicator/
# See http://rainforests.mongabay.com/deforestation/2000/Laos.htm

Social Forestry

Background

Lao PDR is one of the least populated and least developed countries in the ASEAN region. It is also rich in natural resources, particularly natural forests. According to FAO figures, as much as 68% of the country's land is still covered in forests (FAO 2010). However, Government data for the figure are much lower. According to the results of a forest and land cover inventory carried out by the Forestry Department in 2002, total forest cover – more than 20% canopy density and a height over 5 metres – was 9.8 mha or 41.5% of the country's total land area (MAF 2005).

Poverty in Lao PDR is widespread, particularly in mountainous and rural areas. Since the 1990s the Government has implemented economic reforms to generate growth and alleviate poverty, which resulted in a marked reduction in poverty. World Bank data show that the number of people living

[22] According to Lao PDR Government figures there are 9,800,000 ha of forest covering 41.5% of the country's total land area. Lao PDR uses a definition of forest cover of 20% canopy density, which is different from the definition used by FAO (personal communication, Mr. Khamseneas, Planning Division, Department of Forestry (DoF). February 2011).

[23] National Protected Areas under conservation comprise 3.6 mha (personal communication, Mr. Khamseneas, Planning Division, DoF. February 2011).

[24] According to the Lao PDR Forest Sector Strategy to 2020, 8,210,803 ha of forestland has been allocated to local people under the Land and Forest Allocation Programme (MAF 2005).

below the poverty line fell from 46% in 1992 to 33.5% in 2003,[25] although the benefits of economic growth have not always been felt equally throughout society.

Much of Lao PDR's recent economic growth has been fuelled by its natural resources, including forests, minerals, and water resources. In addition to providing economic opportunities, forests protect soil and water resources and provide wildlife habitats. They also contribute to the livelihoods of the country's large rural population, with income from NTFPs providing up to 50% of total household income (MAF 2005). The Government estimates that up to 80% of the population relies on forests for food, timber, fuel, shelter, and medicinal plants.

Forest resources in Lao PDR have declined significantly during the twentieth century. In the 1960s, Lao PDR's forest cover (over 20% canopy density) covered 64% of the country's total land area. This figure fell to 41.5% by 2002 (MAF 2005; World Bank 2008). According to FAO figures, the total forest area, with a canopy density of 10%, has declined by 1.5 mha in the last 20 years (FAO 2010). Furthermore, the rate of deforestation has accelerated in recent years, with a loss of 2% between 1982 and 1992, and of 5.5% between 1992 and 2002 (Vongsiharath n.d.).

Much of the forest that remains is degraded due to uncontrolled access and unsustainable uses. Causes of deforestation and degradation include shifting cultivation and forest clearance for agriculture and infrastructure, such as hydropower projects and roads. Underlying causes include rapid population growth, widespread poverty, unclear land tenure laws, incomplete land demarcation, and weak institutional capacity. Unsustainable forest management and harvesting practices and limited forest planning and monitoring capabilities have further contributed to forest degradation (Fujita *et al.* 2005; Kingkeo 2010; Tong 2009). Illegal logging is also a serious issue, particularly in border areas, where growing demand for timber from neighboring countries like Vietnam is high (EIA/Telepak 2008).

The Government has now launched community-based conservation initiatives to halt deforestation and promote SFM. There is concern about the adverse social, economic, and environmental impacts of deforestation and forest degradation on the highly vulnerable indigenous groups in Lao society.

Definition of Social Forestry (or Equivalent Terms)

CBFM in Lao PDR is focused on production forests and benefit-sharing arrangements for communities. Different types of CBFM exist depending on forest type, function, and ownership. These include participatory forest management, collaborative forest management, traditional forest management, CBFM for ecotourism, smallholder plantations, and industrial plantations (ASFN 2010).

Village forestry is a form of CBFM piloted under the Forest Management and Conservation Project (FOMACOP). The FOMACOP Village Forestry Handbook defines village forestry as "a partnership between Lao villages and local government forestry offices for the sustainable management of forest resources". It transfers the legal ownership and management of forests from the State to local

[25] See: http://data.worldbank.org/country/lao-pdr accessed on 30 November 2010.

authorities and villagers. This enables communities to become active participants in planning and decision-making, alongside district and provincial foresters. The model works best in production forests with commercially viable timber resources that can provide benefits for both national and village socio-economic development (MAF 2005).

Status of Social Forestry in National Policy

Natural forest and forestland is the property of the national community. The State is responsible for managing natural forest and forestland and allocating user rights to individuals and organizations. The Forestry Law of 1996 defines different types of forest and delineates the roles and responsibilities of various Government agencies for forest management. The Law was revised in 2005 to provide guidelines on aspects of forestry such as promotion of tree planting and protection and rehabilitation of natural forests. The Law was amended again in 2007 to strengthen sustainable management of forests and recognizes three types of forests: protection, conservation, and production. The Law outlines the basic principles for sustainable management, protection, development, utilization, and inspection of forest resources; promoting tree planting; ensuring protection of water resources, prevention of soil erosion, and the maintenance of soil quality; conserving biodiversity; and contributing to sustainable livelihoods and national socio-economic development (Kingkeo 2010).

The development of a new forest policy on SFM in 1989 officially recognized the importance of the participation of local people in forest management. Soon after, the Government enacted the Tropical Forestry Action Plan and Land Use Planning and Land Allocation Policy, which further advocated people's participation in forest management. The latter, introduced in 1996, specifically aims to transfer rights and responsibilities over forestland use and management to villages and families in order to reduce shifting cultivation, improve forest conservation, and strengthen rural livelihoods (Kingkeo 2010).

The Forestry Strategy to the Year 2020 of the Lao PDR (FS2020) aligns with national plans and strategies for socio-economic development and forest conservation. Providing official guidelines for the forestry sector, it supports the concept of community-based management of production forests. It also sets out an ambitious target of restoring forest cover to 70% of the total land area by the year 2020 (MAF 2005).

Trends in Social Forestry

Prior to policy changes in the 1990s, the State managed forestlands with limited community participation. The result was rapid forest degradation. Since the introduction of participatory forest management, many organizations and projects have attempted to develop suitable models for local involvement. A number of forest management models have been piloted, most notably:

- FOMACOP was a collaborative effort of the Lao Government, the Government of Finland, and the World Bank. Implemented between 1995 and 2000, the project spanned two State production forests and 41 villages in Savannakhet and Khammouane provinces, putting some

100,000 ha of forest resources under participatory SFM. The expansion of the project between 2000 and 2001 included more than 10 villages in two districts in Khammouane Province. The Forest Management Sub-Programme focused on village forestry in production forests with the objective of institutionalizing the model as a core national forest management strategy. Independent evaluations have found that the village forestry model, as practiced under FOMACOP, can achieve SFM. Since then, the Government has developed new legislation outlining procedures for CBFM in production forests (Fujita *et al.* 2005).

- The SUFORD project encouraged local participation in SFM with the larger aims to improve legal, policy, and incentive frameworks as well as to contribute to livelihood improvement and poverty reduction. SUFORD expanded and elaborated several key SFM approaches, techniques, and approaches developed under FOMACOP, thereby institutionalizing participatory SFM on a wider scale. It also covered aspects of sectoral policy reform, prepared forest management guidelines and procedures, strengthened forest management capacity, improved participatory mechanisms, and strengthened monitoring and control. Key achievements included the establishment of eight Production Forest Areas in the four most important timber-producing provinces (Khammouane, Savannakhet, Salavan, and Champasak) covering a total area of 656,000 ha and approximately one-quarter of the country's natural productive forests (World Bank 2008).
- Village forest management projects such as the Lao-Swedish Forestry Programme Phase IV (1996-2001), the Paklay Forest Conservation and Livelihood Improvement Project in northern Lao PDR 2002-2004), and GIZ's Rural Development in Mountain Areas Programme in Luangnamtha Province.
- CBFM for ecotourism. A 2006 study on forest ecotourism demonstrated that such community-managed projects generated revenue for Government and tourism authorities, private businesses such as tour operators and hotels, and the villages and households involved. They also helped to raise awareness of forest conservation issues. As of 2007, there were 11 such ecotourism projects.

Lao PDR's Land Use Planning and Land Allocation Policy aimed to reduce the extent of shifting cultivation and reduce encroachment on forestland, as well as to improve the standard of living for rural upland people. Land allocation began in the 1990s, and by 2005 over 50% of all villages had taken part in the allocation exercise. However, some weaknesses have been identified in the process, resulting in the reduction of land available for some households and the consequent reduction of incomes. Lack of funds, equipment, and technical staff were the main causes of delayed implementation of land allocation and its modest effectiveness (MAF 2005).

Capacity for effective forest management in Lao PDR remains relatively weak at all levels. Of the 106 Production Forest Areas in the country, only six have approved management plans, and in most cases villagers do not receive their legally-guaranteed share of income from timber harvesting. Decentralized forest management in Lao PDR requires organizational capacity building at all levels, including the village level.

Institutions Involved in Social Forestry

The main agencies responsible for forestry in Lao PDR are:

- The Ministry of Agriculture and Forestry (MAF) is the key ministry for development of forest management policy. The DoF under MAF is the main agency responsible for implementation of forest management.
- There are Agriculture and Forest Offices at Provincial (PAFO) and District (DAFO) levels. PAFO takes the initiative in organizing village forestry and trains DAFO staff in different aspects of village forestry. DAFO conducts extension work to disseminate village forestry, encourage village participation, train village teams, organize forestry work, and prepare and implement collaborative management plans (DoF 2001).
- The Department of Forest Inspection (DOFI) is a newly established agency for forest law enforcement. It was established in 2007 after revision of the Lao PDR Forestry Law. The role of DOFI is to conduct forestry control operations, investigate allegations of illegal logging, make arrests and pursue prosecutions, and collaborate with other agencies, the private sector, and civil society organizations on forest law enforcement.
- The National Agriculture and Forestry Research Institute was established in 1999 to conduct integrated research on agriculture, forestry, and fisheries, and provide technical information for development of strategies in line with Government policies.
- The National Agricultural and Forestry Extension Service, established in 2001, was a fundamental step in the development of a national extension system.

Other institutions include the Land Management Agency; the Ministry of Industry and Commerce which is responsible for timber industry relations; the Ministry of Finance which is responsible for benefit-sharing of timber revenues; and the Water Resource and Environment Agency which has a history of engagement in forests, biodiversity conservation, and watershed management.

A number of donor agencies have provided support to SFM and community forestry in Lao PDR including the World Bank, ADB, IFAD, SIDA, Danida, FINNIDA,[26] and the Dutch Government.

Apart from the presence of some international NGOs, civil society organizations in Lao PDR are not highly developed.

[26] Respectively, the Asian Development Bank, the International Fund for Agricultural Development, the Swedish International Development Cooperation Agency, the Danish International Development Agency, and the Finnish International Development Agency.

Climate Change Mitigation and Adaptation

Background

Lao PDR is one of the most vulnerable countries in the region to climate change. Over 70% of the population relies on natural resources for their livelihoods and the national economy is heavily dependent on the country's natural resource base (WREA 2009).

Lao PDR is likely to experience the following impacts of climate change: changing weather patterns, changes in surface temperature and patterns of rainfall, a longer dry season, more frequent droughts, and more flooding, particularly flashflooding and landslides. These factors may reduce agricultural production and affect household food security, water supply, and the dynamics of water- and vector-borne diseases.

As an LDC, Lao PDR has relatively low capacity to adapt to climate change. Its people, particularly its large rural population, are among the most susceptible to its impacts.

REDD+ Strategy Development

There is growing interest in activities that support the development of a national framework for REDD+ in Lao PDR. Lao PDR's R-PIN was approved in August 2008. The country received US$200,000 from the FCPF for development of its R-PP, which then led to the submission and approval of the R-PP in October 2010. Lao PDR's R-PP process was commended internationally for its strong national ownership by the DoF. The R-PP is the basis for REDD+ strategy development in Lao PDR. Potential mechanisms to reduce emissions from the forestry sector proposed in the R-PP include improved forest law enforcement to reduce illegal logging, reducing shifting cultivation, and supporting ethnic minority communities in upland areas to improve agroforestry practices. Lao PDR is a pilot country under the FIP.

The REDD+ Task Force is currently the Government's main instrument for coordinating, managing, and promoting REDD+ activities. Comprised of representatives from relevant ministries, the Task Force is responsible for:

- Management of the FCPF process;
- Promotion and coordination of planning and implementation of REDD+ projects and pilots;
- Participation in and observation of the international climate change dialogue and REDD+ negotiations; and
- Capacity building through workshops and seminars.

Other stakeholders such as NGOs, other Government agencies, consultants, and donors attend the Task Force's meetings to discuss and decide upon REDD+ related issues. The Task Force endorses an annual review of REDD+ in Lao PDR, and has recognized the need for extensive capacity building at

all levels to facilitate implementation of a national REDD scheme, as well as extensive consultation and awareness raising about REDD+, land-use change, and shifting cultivation.

REDD+ is highly relevant for Lao PDR as it will provide essential funding and incentives for forest conservation, sustainable management of forests, and restoration activities. A number of donor-funded projects and pilot activities have begun to test aspects of REDD+.

National Climate Change Mitigation Activities

Possibilities for climate change mitigation through social forestry in Lao PDR include:

- Agroforestry and tree planting;
- Forest protection and forest regeneration; and
- Reductions in the amount of burning and forest clearance.

Lao PDR's FS2020 sets a target of naturally regenerating up to 6 million ha of forestland and planting up to 500,000 ha of trees in badly degraded areas, as an integral part of efforts to improve rural livelihoods and mitigate the impact of natural disasters.

National Climate Change Adaptation Activities

Lao PDR's NAPA was submitted to the UNFCCC in May 2009. The NAPA analyzes recent climate trends and impacts, and prioritizes a range of adaptation options. It identifies 45 key proposals for adaptation, focusing on the four key sectors of agriculture, forestry, water resources, and public health. Proposals in the forestry sector include eradicating shifting cultivation and strengthening the capacity of volunteers to manage village forests. Other projects include reforestation, improving food security, reducing flood and drought vulnerability, and developing early warning systems (WREA 2009).

Limitations in national expertise, financing, and adaptive capacity will be key challenges for Lao PDR in climate change adaptation. Greater coordination among line agencies is essential for adaptation efforts to be effective.

Other Climate Change Projects and Programs

The National Climate Change Strategy, with DoF inputs, was approved in March 2010.

Phase Two of the SUFORD project is reviewing funding sources and options for REDD, and has conducted a series of test studies on carbon monitoring.

Climate Protection through Avoided Deforestation (CliPAD) is a Lao-German program that was initiated January 2010. In support of the objectives of the FS2020 2020 and the REDD R-PP, it

contributes to the implementation of national strategies on forest conservation, climate change mitigation, and poverty reduction. It focuses on forests in and near protected areas under threat from land-use change, combined with high GHG reduction potential and opportunities for species protection and water management.

The WCS is working with the Government to plan and manage two protected areas in the country (Bolikhamxay Province and the Nam Et Phou Loey National Protected Area in the northeast). Feasibility assessments are being carried out to determine how sub-national voluntary carbon market projects might be developed and implemented.

Institutions Involved in Climate Change

Lao PDR's National REDD+ Task Force, established in November 2008, consists of representatives from the MAF, the Water Resources and Environment Administration (WREA), the National Land Management Authority, the Ministry of Industry and Commerce, and the National University of Laos. It takes the lead on FCPC REDD+ pilot projects and UNFCCC REDD+ negotiations.

The Climate Change Office of the Department of Environment, within the WREA is leading Lao PDR's efforts to tackle climate change. WREA and the DoF coordinate on climate change matters affecting forests and agriculture through the National REDD Task Force (Vickers *et al.* 2010).

Conclusion

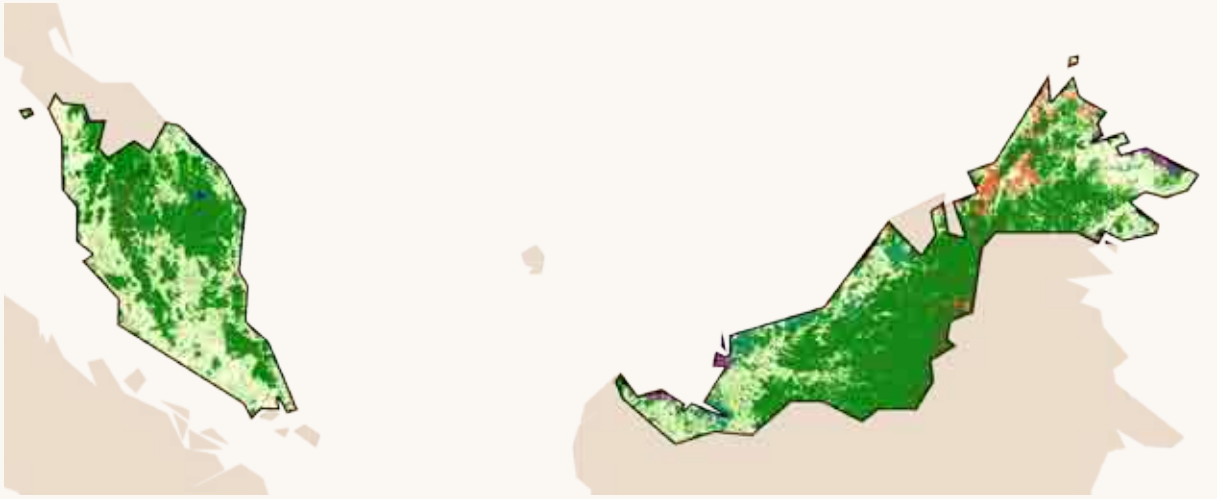
With extensive forest coverage, mechanisms such as REDD+ are highly relevant for Lao PDR. They can provide essential funding and incentives for forest protection and may help to reduce poverty among forest-dependent people.

A number of different models for engaging local communities in SFM have been piloted in the past decade with support from international donors. These may provide a firm foundation upon which to develop pilot social forestry projects that can contribute to climate change adaptation and mitigation. Lao PDR's REDD Task Force has initiated steps toward REDD+ Readiness through development of its R-PIN and R-PP. The Lao NAPA has identified proposals for climate change adaptation projects in agriculture and forestry, including reforestation.

Although forest laws provide an adequate framework for forest management, capacity for effective forest management in Lao PDR is weak at all levels. Lao PDR's REDD+ Task Force has recognized the need for extensive capacity building at all levels to facilitate implementation of a national REDD scheme, as well as extensive consultation and awareness raising about REDD+, land-use change, and shifting cultivation. However, financial and human resources remain inadequate.

The role of communities in forest resource management and their possible benefits from schemes such as REDD+ need further clarification. Furthermore, illegal logging is a serious problem that threatens to destroy the country's remaining forests. The recent establishment of the DOFI may help to improve enforcement, reduce illegal logging, and improve monitoring and governance.

Malaysia



Key Statistics: The Federation of Malaysia	
Total population	27,467,837 in 2009 (World Bank*)
Rural population	7,888,762 in 2009 (World Bank*) 29% of total population
Total land area (excluding inland waterbodies)	32,855,000 ha
Total forested area	20,456,000 ha [27] 62% of total land area
Production forest	12,739,000 ha 62% of total forest area
Protected forest – soil and water	2,694,000 ha 13% of total forest area
Protected forest – biodiversity conservation	1,946,000 ha 9.5% of total forest area
Forest under community management	Data not available
Carbon stocks	In above- and belowground living biomass: 3,212 million tonnes In litter: 43 million tonnes In soil: data not available
Deforestation rates (natural forest)	Average -128,000 ha per year 2005-2010# Average -0.64% per year 2005-2010

[27] This figure includes rubber plantations, but not oil-palm plantations.

Key Statistics: The Federation of Malaysia	
Social/community forestry policies/programs	• Joint Forest Management • Community-based Natural Resource Management • Small Grants Programme to Promote Tropical Forests • Community Forestry Development Project
Climate change mitigation policies/programs	• Malaysian Industrial Energy Efficiency Improvement Project • Biomass-based Power Generation and Co-generation in the Malaysian Palm Oil Industry (BioGen) • Malaysia Building Integrated Photovoltaic • Comparative studies on carbon sequestration • CDM projects in energy, waste, and agriculture
Climate change adaptation policies/programs	• Second National Communication Project • Malaysian Meteorological Department climate change modelling studies • Climate Change and Relationships to Disease • Impact of Climate Change on Water Resources • National Coastal Vulnerability Index Study • Study on Effective Water Resource Management • Conservation and Sustainable Use of Tropical Peat Swamp Forests and Wetlands Ecosystems • National Self-Assessment for Capacity Building Needs for Global Environment Management

Map Source: Stibig, Beuchle, and Janvier, 2000.
Source: FAO Global Forest Resources Assessment 2010: Malaysia (unless otherwise stated)
* World Bank indicators: see http://data.worldbank.org/indicator/
# See http://rainforests.mongabay.com/deforestation/2000/Malaysia.htm

Social Forestry

Background

Malaysia consists of 13 states in three regions: Peninsular Malaysia with 11 states plus the two Borneo states of Sabah and Sarawak. The Malaysian Federal Government has jurisdiction over matters such as finance, foreign affairs, international trade, defence and security, while individual states have control of their own natural resources.

According to FAO, Malaysia has some 20 mha of forest cover (including 1.2 mha of rubber plantations) covering 62% of its territory. Of this, 4.5 mha are protected for biodiversity, soil and water conservation, including 1.95 mha which are designated as national parks or wildlife sanctuaries (FAO 2010).[28] Of the total forest area, 8 mha (44%) are in Sarawak, 5.9 mha (32%) are in Peninsular Malaysia, and 4.3 mha (24%) are in Sabah (MTC 2009).

[28] Figures on forestland in Malaysia vary due to different classifications used by different organizations. Malaysian Timber Council (MTC) figures vary from FAO figures shown in the table above. The MTC, which does not include rubber plantations in forest areas, states there are 18.25 mha of forestland and 6.06 mha of tree crops such as oil palm, rubber, and coconut. There are 4.05 mha of protected forest, of which 2.65 mha are protected for soil and water conservation, and 1.4 mha are national parks and wildlife sanctuaries (Malaysia Forestry and Environment Figures, MTC 2009).

Sabah and Sarawak have a high number of indigenous peoples. In Sarawak there are 28 officially recognized indigenous groups making up around 50% of the population, while in Sabah there are 39 groups, making up 60% of the population (MTC 2009; Yong 2006). Most of these indigenous peoples live in rural areas and practice subsistence farming, depending on forest resources for food, medicine, fuel, building materials, and other household needs. Although shifting cultivation has often been blamed for deforestation and forest degradation, recent studies suggest its impact on deforestation has been overestimated.

Estimates of forest loss in Malaysia vary from 87,000 to 250,000 ha of forest every year (FAO 2010; Yong 2006). Up to half of the forests in Peninsular Malaysia and a fifth of the forests in Borneo had disappeared by the late 1980s (Yong 2006). Commercial logging has been a major driver of deforestation, as well as the clearance of forests for oil palm, agricultural production, construction of dams, and shifting cultivation (Yong 2006; Westerholm 2010). The timber industry has been a major export earner and driver of economic growth in Malaysia since the 1960s, and was the country's fifth largest export earner in 2006. However, the communities who live in and depend upon the forests for subsistence are some of the poorest people in Malaysia (Yong 2006).

Malaysia is the world's second largest producer of palm oil.[29] The area of land covered by palm oil plantations increased from 60,000 ha in 1960 to over 3 mha in 2001. Palm oil plantations now cover 11% of Malaysia's land area (Brown and Jacobson 2005). There are concerns over the destruction of Malaysia's remaining natural forests and peatlands for expansion of oil-palm plantations, as well as frequent reports in the media of land conflicts and violations of indigenous rights by the State and private companies in the pursuit of profits from timber extraction and palm oil.

Definition of Social Forestry (or Equivalent Terms)

Community forestry in its traditional form has been practiced in Malaysia for generations. Social forestry in Malaysia generally involves the planting of fruit trees and other food crops together with timber species. Four main types of social forestry activities exist in Malaysia:

- Rural forestry or village forestry which involves planting of fruits trees and specialty timber near forest fringes;
- Agroforestry as parts of the effort to reduce shifting cultivation and bring development to rural communities;
- Recreation forest for outdoor recreation and opportunities for local people to engage in trade and ecotourism; and
- Urban forestry – involvement of urban people in greening programs and planting of trees and shrubs in urban areas (ASEAN Social Forestry Workshop, March 2005).

There are various individual social forestry projects in Malaysia utilizing a range of forest management models, such as Joint Forest Management (JFM), Community-based Natural Resource Management

[29] Indonesia is now the world's largest palm oil producer and exporter.

(CBNRM), and the Community Forestry Development Project (CFDP). These projects are mainly funded by external donors and are implemented by State forest departments with the participation of local communities.

Status of Social Forestry in National Policy

In Malaysia 98% of natural forests and almost 70% of forest plantations are owned by the State (ITTO 2006, cited in Westerholm 2010).

The Interim Forestry Policy, formulated in 1952, was adopted as the National Forestry Policy in 1978 and revised in 1993. Its objectives are management of the Permanent Forest Estate (PFE) in accordance with SFM principles in order to maximize social, economic, and environmental benefits for the nation. In regards to engagement of local people in forest management, the policy includes:

- Participation of *Bumiputra* (Muslim Malays and indigenous peoples) in wood-based industries, in line with the Government's National Development Policy;
- Involvement of local communities near forest fringes in agroforestry, through planting of fruit trees to conserve forestry resources; and
- Development of community forestry to cater for public needs in recreation and tourism, the planting of fruit trees and other plants on the edge of the PFE and urban areas to provide shade, clean air, and aesthetic values (MTC, 28 May 2008).

The National Forest Act of 1984 permits indigenous people to collect NTFPs from Permanent Forest Estate – they include rattan, bamboo, honey, herbs, decorative plants, and material for local crafts. The Act was amended in 1993 to introduce more severe penalties for forest-related offences such as encroachment and timber theft. Five-year national development plans guide forestry development in Malaysia.

The Sabah Land Ordinance 1930 and Sarawak Land Code recognize NCR to land. According to the Government's definition of NCR, access rights are restricted to land that has been continuously farmed or cultivated since 1 January 1958 (*temudra*). However indigenous people believe their customary access rights extend beyond this area and include the virgin forests (*pulau*) within their customary communal lands (*pemakai menua*) *(*Bian n.d.).

Trends in Social Forestry Implementation

There are several externally-funded social forestry projects in Malaysia. These include eight CBNRM projects funded by Danida and implemented by Malaysian environmental NGOs in the three regions of Malaysia; an EC/UNDP Small Grants Programme which is currently supporting 20 community-based SFM projects; and a UNDP-funded project in Sabah implemented by the Sabah Forest Department to improve livelihoods for three rural communities (Mangkuwagu-Gana-Bengkoka project) through JFM.

Indigenous communities in Malaysia have traditionally relied upon forest resources for food, fuel, building materials, medicines, and spiritual practices. Recent studies show that the impact of shifting cultivation on deforestation may be less than previously thought. In the practice of indigenous peoples in Sarawak – with a small agricultural plot for growing rice, supplemented by a larger area for hunting and gathering – the same area of land is used over a period of years, with very little expansion into new forest areas (Westerholm 2010).

Indigenous rights groups such as the Network of Indigenous Peoples and NGOs on Forest Issues in Malaysia (JOANGOHutan) and The Indigenous Peoples Network of Malaysia (JOAS) maintain that forests are a vital source of indigenous peoples' livelihoods, histories, cultures, and identities. Although community forestry has been practiced in Malaysia for generations, changes in land-use patterns – specifically timber extraction, oil-palm expansion, and infrastructure projects – have pushed many indigenous people off their customary lands. This sometimes occurs through contentious forced resettlement programs that, in effect, cause changes in traditional patterns of subsistence (Yong 2006). Malaysia has endorsed the UN Declaration on the Rights of Indigenous Peoples, but State laws are not sufficiently robust to address the complexities surrounding indigenous peoples' customary rights over their lands. A series of recent High Court judgements have challenged the interpretation of these laws, however, and are slowly driving change.

It is estimated that 86% of deforestation in Malaysia between 1995 and 2000 was for the creation of State oil-palm plantations.[30] In Sabah and Sarawak, the area of land used for palm oil production increased from 186,744 to 1,673,721 ha between 1984 and 2003 in response to the increasing global demand for edible oil and biofuels.[31] The growth of the oil-palm industry has generated economic growth for the country and employment for people in rural areas. However plantations have often been established in highly biodiverse lowland tropical forest areas with rich peat soils, driving up carbon emissions and the loss of biodiversity.

Institutions Involved in Social Forestry

The National Forest Council (NFC) was established in 1971 to harmonize SFM policies and practices between federal and state governments. It serves as a forum for them to discuss and resolve problems relating to forestry policy, administration, and management. Chaired by the Deputy Prime Minister, its membership includes the chief ministers of the 13 states, heads of forestry departments in Peninsular Malaysia, Sabah, and Sarawak and relevant federal ministers. However, Sabah and Sarawak Forest Departments are only observers in the NFC and are not legally bound by the National Forest Policy (Westerholm 2010).

The Sarawak Forest Department was established in 1919 to sustainably manage Sarawak's forest resources for national socio-economic development. Its operational functions have since been transferred to the Sarawak Forestry Corporation, which acts as an agent of the State Government (Sarawak Forestry Corporation Ordinance 1995). The Department is now primarily responsible for implementing the laws directly applicable to forestry.

---

30 www.mongabay.com/borneo/borneo_oil_palm.html accessed on 30 November 2010.
31 www.mongabay.com/borneo.html accessed on 30 November 2010.

The Sabah Forest Department, established in 1914, is responsible for the State's forest resources, covering an area of 3.6 mha of forest reserves – or 50% of the State's total land area.

JOANGOHutan is the Network of Indigenous Peoples and NGOs on Forest Issues in Malaysia. Jaringan Orang Asal SeMalaysia (Indigenous Peoples Network of Malaysia) or 'JOAS' is an umbrella network for 21 organizations throughout Malaysia that represents different indigenous peoples' organizations and communities. As a focal point for indigenous rights and advocacy in Malaysia, it represents indigenous communities at national, regional, and international levels. Malaysian Environmental NGOs (MENGOs) is a network of 20 environmental groups that champion the cause of sustainable development and environmental protection.

Climate Change Mitigation and Adaptation

Background

Potential impacts of climate change in Malaysia include increased droughts and irregular rainfall, which are expected to have a significant impact upon the country's agricultural productivity, particularly the production of rice. There may also be water shortages and increased flooding. More intense storms and sea-level rises will particularly affect coastal regions. Malaysia's indigenous peoples are likely to be more severely affected by climate change, as their livelihoods are closely connected to the natural environment and they possess fewer resources to adapt.

REDD+ Strategy Development

Malaysia has set a national target of maintaining 50% of forest cover, thereby making a strong national commitment to forest preservation.

Malaysia has twice submitted its views on REDD+ to the UNFCCC, but as of yet, the country is not engaged in any of the REDD+ pilot initiatives. It supports REDD+ in principle but has emphasized the need for REDD+ mechanisms to generate benefits for countries that have managed their forests sustainably and have low rates of deforestation. Malaysia itself has so far financed forest protection through SFM. Forests and plantation tree crops not only generate considerable income for State agencies and private companies, but also create significant rural employment. The potential revenue streams from REDD – and the array of rules and modalities that will govern it – are not yet clear. This presents a challenge in terms of weighing the uncertain future benefits from REDD+ against the tangible benefits of SFM. Therefore Malaysia maintains that any steps taken towards REDD+ Readiness should also be generally beneficial to forests and stakeholders, regardless of the eventual outcome of REDD+.

Nonetheless, work is to commence on a National REDD+ Strategy in collaboration with state governments. The State of Sabah has recently announced its plan to proceed with a State-level REDD+ Strategy following an international conference held in November 2010.

National Climate Change Mitigation Activities

According to the UN Development Report in 2007 Malaysia's emissions of CO_2 grew by 221% between 1990 and 2004 – faster that any other country in the world (Westerholm 2010). At the UNFCCC's COP15 in 2009, the Malaysian Prime Minister pledged a reduction of up to 40% of the country's emissions per unit of GDP by 2020, on the condition that developed countries provided technological and financial support.

National projects and research studies that aim to reduce GHG emissions include:

- The Malaysian Industrial Energy Efficiency Improvement Project;
- Biomass-based Power Generation and Co-generation in the Palm Oil Industry;
- Malaysia Building Integrated Photovoltaic;
- Comparative studies on potentials of carbon sequestration projects;
- CDM projects on energy, waste, and agriculture.

National Climate Change Adaptation Activities

Research studies and projects on climate change adaptation include:

- The Second National Communication Project – GHG inventory, projections and mitigation options, vulnerability assessment, and adaptation strategies;
- Climate Change Modelling, Global Canopy and Forest-Climate Interaction Study, by the Malaysian Meteorological Department;
- Climate Change and Its Relationship to Disease Patterns in Malaysia;
- Impact of Climate Change on Water Resources in Peninsular Malaysia;
- National Coastal Vulnerability Index Study;
- National Study for Effective Implementation of Integrated Water Resources Management;
- Conservation and Sustainable Use of Tropical Peat Swamp Forests and Wetland Ecosystems; and
- National Self-Assessment for Capacity Building Needs for Global Environment Management

Other Climate Change Projects and Programs

Sixteen projects are registered with the Clean Development Mechanism Executive Board. However, none of them are afforestation/reforestation (A/R) projects. It is not clear whether any A/R CDM projects will be initiated in future.

Institutions Involved in Climate Change

The MNRE is the leading authority for climate change in Malaysia.

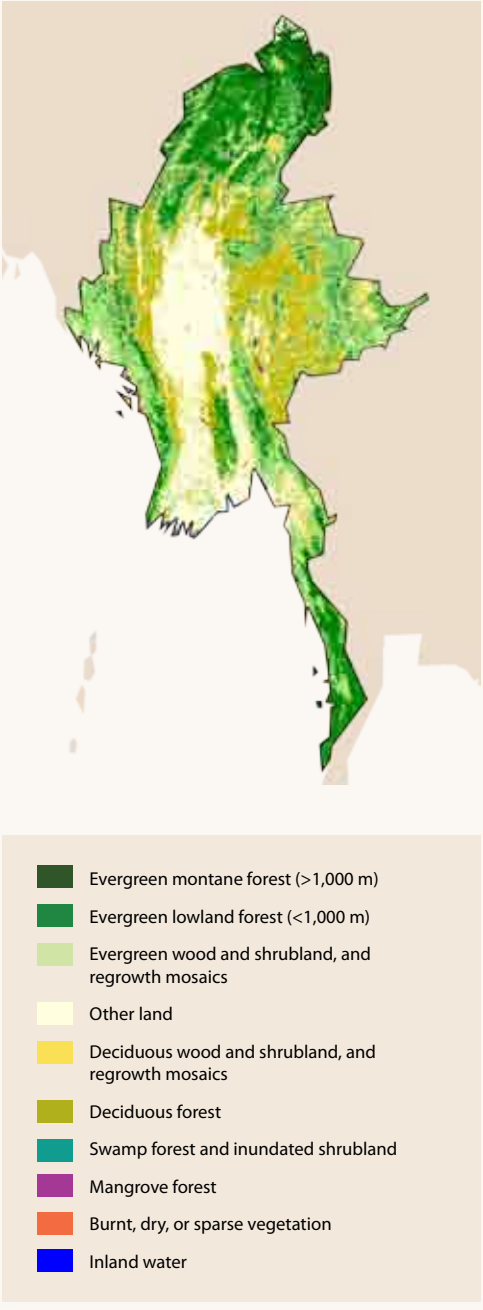
Conclusion

Malaysia has a significant albeit declining area of tropical forests, which are high in biodiversity and carbon storage potential. It has set a target of maintaining 50% of its forest cover. Despite this commitment, timber, wood products, and palm oil are key commodities and generate considerable export earnings. The Government has recently created incentives for increased production in the 10th Malaysia Plan. The impact of these conflicting policies on Malaysia's remaining forests remains to be seen.

A variety of small-scale social forestry projects exist within Malaysia including community-based agroforestry and mangrove rehabilitation projects. Opportunities exist for such projects to support climate change adaptation and increase the resilience of local communities. However, there is no clear strategy for wide-scale social forestry in the country. Weak State recognition of customary rights and indigenous peoples' lack of secure access to forestland is an impediment to upscaling social forestry in the country. Commercial timber activities and tree plantation sometimes take place at the expense of indigenous peoples' rights, their access to land, and their livelihoods.

Although Malaysia has expressed its support for REDD+ in principle, it maintains that REDD+ mechanisms should not be disadvantageous to countries with large forest areas and low deforestation rates. Malaysia is unwilling to forego the considerable benefits from SFM while the rules, modalities, and financial returns from future REDD+ mechanisms remain uncertain. As a result, Malaysia has yet to develop a National Strategy on REDD+ and engage in REDD+ pilot initiatives.

Myanmar



Key Statistics: The Republic of the Union of Myanmar	
Total population	50,019,775 in 2009 (World Bank*) [32]
Rural population	33,393,201 in 2009 (World Bank*) 76% of total population
Total land area (excluding inland waterbodies)	65,755,000 ha
Total forested area	31,773,000 ha 48% of total land area
Production forest	19,633,000 ha 62% of total forest area
Protected forest – soil and water	1,352,000 ha 4% of total forest area[33]
Protected forest – biodiversity conservation	2,081,000 ha 6.5% of total forest area
Amount of forest area under community management	41,000 ha owned by communities in 2005 0.12% of total forested area
Carbon stocks	In above- and belowground living biomass: 1,653 million tonnes In litter: 67 million tonnes In soil: data not available
Rates of deforestation (natural forest)	-339,000 ha per year 2005-2010 -0.99% per year 2005-2010
Social/community forestry programs/ activities	• *Taungya* agroforestry system • 1992 Forest Law • 1995 Myanmar Forest Policy • 1995 Forest Department, Community Forestry Instructions
Climate change mitigation programs/ activities	• Assessment of options for GHG emission reduction has been conducted and strategies have been developed for key socio-economic sectors. • Energy policy laid down by the Ministry of Energy aims to produce 67% of total energy from hydropower and biomass

[32] 58.38 million in 2008-2009 with a growth rate of 1.52% (personal communication with Mr. Ohn Lwin, 2011).

[33] Production forest amounts to 18,986,000 ha, 60% of the total forest area (personal communication with Mr. Ohn Lwin, 2011).

Key Statistics: The Republic of the Union of Myanmar	
Climate change adaptation programs/activities	• Myanmar's NAPA is being prepared with financial support from the LDCF and UNEP • The National Commission for Environmental Affairs (NCEA) launched an Initial National Communication project in 2008 with financial assistance from the Global Environment Fund and UNEP • NCEA Air Quality Assessment. Successive Air Quality monitoring activities in Yangon in 2007, Mandalay in 2008 and Nay Pyi Taw in 2009 • Vulnerability and Adaption Assessments of potential natural hazards, including cyclones, flood and storm surges, intense rain, extreme heat, drought, and sea-level rise • Forest conservation and reforestation initiatives • Desertification initiatives

Map Source: Stibig, Beuchle, and Janvier, 2000.
Source: FAO Global Forest Resources Assessment 2010: Myanmar (unless otherwise stated)
* World Bank indicators: see http://data.worldbank.org/indicator/
# See http://rainforests.mongabay.com/deforestation/2000/Myanmar.htm

Social Forestry

Background

Myanmar possesses a wide variety of different ecosystems, ranging from coastal areas to tropical rainforests to snow-capped mountains. This creates a great diversity of flora and fauna. Various types of forest exist within the country, including mangrove forests, swamp forests, dry forests, tropical and temperate evergreen forests, deciduous forests, and tropical hardwoods. Myanmar's teak is some of the finest and most valuable types of timber in the world.

Myanmar is an agrarian country and forests are central to both the national economy and local livelihoods. FAO estimates that around 70% of people in rural areas are heavily dependent upon forests and NTFPs for their basis daily needs, including income, food, medicines, wildlife for hunting, fodder, fuelwood, and household and building materials.

Forestry has been a major source of income for many decades and has played an integral part in the development of the country. It is estimated that timber generates around 10% of Myanmar's total export earnings, in addition to contributing to other sectors of the economy such as agriculture, energy, livestock, and tourism (Htun 2009).

Myanmar's natural forests are still the country's primary source of forest products. The country has a reputation for SFM. The Myanmar Selection System manages forests, selectively logging mature trees based on sustainable yields, an annual allowable cut, and a 30-year felling cycle. Extraction of logs is done largely by elephants, a process which has a lower environmental impact and creates less wastage than indiscriminate mechanical logging (ITTO 2004).

However, high demand for timber from neighboring countries, illegal logging, and the growing need for land for other uses – as well as population growth, rural poverty, and shifting cultivation – are putting increasing pressures on the country's forests. Unsurprisingly, the amount of forest in Myanmar is rapidly declining. According to Forest Resource Assessment figures, forests as a proportion of total land area dropped from 57.9% in 1990, to 51.5% in 2000, and 47.6% in 2005 (FAO 2010). Every year some 339,000 ha of natural forest are destroyed, giving the country one of the highest rates of deforestation in the ASEAN region and the world.

Definition of Social Forestry (or Equivalent Terms)

Myanmar uses the term community forestry rather than social forestry. The Community Forestry Instructions of 1995 define community forestry as the "afforestation of areas insufficient in fuelwood and other forest products for community use" and for the "planting of trees and extraction and utilization of forest products to obtain food supplies, consumer products and income" by local community participation (FAO 1997). An important distinction of community forestry in Myanmar is that the concept entails involvement of the people rather than direct ownership. The Government's role is that of catalyst and partner.

Community forestry in Myanmar follows the *taungya* system – an agroforestry system in which food crops are grown on the same land as young tree seedlings. The system is believed to have been developed by the British Colonial Administration, and was practiced successfully by indigenous peoples for many years. Crops can be produced for two to four years, until the trees grow larger and the canopy closes. Although the system does not give people long-term secure tenure to access State forests, it does enable them to participate in forest resource management and agriculture (Thaung 2003).

Community forestry activities include planting trees in wastelands, homesteads, roadsides, and degraded forestland, and/or managing community-owned natural forests. Community forestry is an attempt to promote forestry development by community participation and meet the needs of the people.

The objectives of community forestry in Myanmar are to:

- Produce fuel and other goods essential to meet basic needs at rural household and community levels;
- Generate income and employment in the community;
- Minimize local ecological degradation and rehabilitate degraded areas; and
- Stabilize and strengthen rural communities and institutions.

Status of Social Forestry in National Policy

The State owns all forests in Myanmar, with the exception of a small number of community forests. These are owned by local people under long-term leases from the Government (Htun 2009).

In 1992, the Government enacted a new Forest Law based on SFM principles. These included maintaining Myanmar's natural forests and ecosystems, supporting the basic needs of its people, and promoting public awareness and participation in forest policy implementation, conservation, and sustainable management.

The 1995 Myanmar Forest Policy recognizes the importance of the forestry sector in national socio-economic development and the need to ensure environmental protection. It announced the Government's commitment to realize the full economic potential of forest resources while protecting the environment, conserving wildlife, plants, and ecosystems, and ensuring the sustainability of forest resources for future generations. The policy designated 30% of total land area as reserved forest and 5% as protected areas systems, and promoted the establishment of plantations to reduce pressure on natural forests. It also recognized the role of forests in providing for the basic needs of rural people and the subsequent need for their participation in forest management (FAO 1997).

The Community Forestry Instructions issued by the Forest Department in 1995 provided a comprehensive legal framework to promote and facilitate community participation in forest management.

Myanmar's Agenda 21 was developed following the 1992 World Earth Summit in Rio de Janeiro to guide implementation of Myanmar's Forest Policy in accordance with socio-economic objectives and ecological principles.

Trends in Social Forestry Implementation

It is estimated that around 38 million people are dependent on forests for their livelihoods. An area of 6,749,000 ha of forest has been set aside to provide for these needs and roughly 260 agreements are in place between social groups and the Forest Department (ITTO 2004).

Official community participation in forest management in Myanmar was somewhat limited until the formal recognition of the *taungya* system in the early 1990s. Since then, a number of community-based forest projects have taken place. DFID's Pyoe Pin project, for instance, is developing a community forestry program spanning 45 villages and 20,000 acres in Kachin State with the aim of eliminating shifting cultivation practices. It helps communities establish agroforestry systems that cultivate perennial and agricultural crops together, in a way that supports both conservation and subsistence needs. Such initiatives need to be scaled up to the national level (Thaung 2003).

Despite these initiatives, many problematic issues remain. Community forestry in Myanmar is hobbled by uncertainty of land tenure, limited local capacity, and lack of community empowerment. Clarity of local communities' rights and responsibilities is particularly essential. In 2002, the Forest

Department published a set of guidelines and technical information to assist people in managing forests and establishing community forests. Nonetheless, further steps to improve the capacity of Government staff, community workers, and local people are needed for successful implementation of SFM (Thaung 2003).

Myanmar's strong forest policy and legal framework notwithstanding, implementation of laws and forest governance is extremely weak. A significant amount of illegal logging still takes place, mostly close to border areas with China and Thailand in which demand for Myanmar's hardwoods is high. As a result, forest area in Myanmar dropped from 57.9% in 1990 to 47.6% in 2005 (Htun 2009).

Institutions Involved in Social Forestry

The Ministry of Forestry (MoF) became a separate entity in 1992 when the Ministry of Agriculture and Forest was restructured. The MoF has five institutions:

1. The Forest Department is the main Government body for forestry sector policy and implementation and is responsible for the protection, conservation, and sustainable management of the nation's forests;
2. The Myanmar Timber Enterprise carries out timber harvesting, milling, processing, and marketing of forest products;
3. Dry Zone Greening Department carries out reforestation of degraded lands and environmental restoration in the central Myanmar dry zone;
4. The Planning and Statistics Department coordinates the work of other organizations according to directives issued by the Minister's Office; and
5. The NCEA was formed in 1990. It is the focal point for environmental policy planning at the national level and is also concerned with forest depletion and degradation. The NCEA is also the focal point for environmental matters with international organizations and other countries.

Private sector actors include the Myanmar Forest Products and Timber Merchants' Association and the Myanmar Forest Products Joint Venture Corporation Ltd.

Climate Change Mitigation and Adaptation

Background

The effects of climate change are already apparent in Myanmar. They include rising temperatures, more frequent and intense storms, and changes in weather patterns. The 2009 monsoon period was reportedly shorter than usual, bring lower than average rainfall in central regions, but torrential rain and severe localized flooding in southern parts of the country.

The integration of climate change concerns into development plans and programs is vital to further enhancing Myanmar's low-carbon economy and reducing its vulnerability to climate change. In order to mitigate GHG emissions and adapt to the warming climate, policy measures have been identified for integration into the national and sectoral development plans and programs in key sectors such as energy, industrial processing, agriculture, and water.

The National Environmental Policy calls for the integration of environmental considerations into the development process. It forms the basis for developing environmental strategies, programs, and plans. However, Myanmar only has draft national environmental law.

REDD+ Strategy Development

Myanmar has yet to engage in any REDD+ activities, although preliminary discussions between UN-REDD and Myanmar took place in late 2010 regarding the country's potential engagement in REDD+. Based on Myanmar's average deforestation rate from 2000 to 2005 of 466,000 ha per year, the country could generate between US$128 million to US$1.8 billion from carbon finance initiatives by reducing emissions from deforestation. This could boost per capita GDP from 5% to 20% (Htun 2009).

However Myanmar is heavily dependent on timber exports and agriculture as its main sources of revenue. There is growing demand for timber products from Myanmar's neighbors, Thailand and China, which creates disincentives to the development of REDD+ activities. It is therefore unclear whether Myanmar will move to initiate REDD+ activities in the near future.

Poor governance in Myanmar has proved a challenge in forest protection. Myanmar's highly centralized state system may also present considerable challenges in the effective development, implementation, and MRV of REDD+, as well as the distribution of REDD+ benefits to local people (Chaudhury 2008).

National Climate Change Mitigation Activities

Myanmar signed the UNFCCC in 1992 and ratified the convention in 1994, and regularly participates in the UNFCCC's COP and its subsidiary bodies' meetings. It was one of the 12 participating countries in the Asia Least-Cost Greenhouse Gas Abatement Study and ratified the Kyoto Protocol in 2003.

Myanmar acceded to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol in November 1993. Completion of its Country Program during 1998-1999 was supported by UNEP and coordinated by the NCEA.

Myanmar is under no obligation to quantify reduction of GHG emissions. It has conducted mitigation options assessments in each sector and the development of National Strategies for GHG Emission Reduction. Furthermore, it has formulated sector development plans to support programs on National Greenhouse Gas Inventory and Vulnerability and Adaptation Assessment, in addition to policy and adaptation options for agriculture, public health, water resources, forestry, coastal zone, and biodiversity of fisheries.

National Climate Change Adaptation Activities

Cyclone Nargis in 2008 inflicted severe damage on Myanmar. In order to make the country more resilient to natural hazards, the NDPCC was formed in the same year. Myanmar has prepared the MAPDRR) for 2009-2015, which identifies projects and activities that are necessary to meet targets in the HFA and the ASEAN Agreement on Disaster Management and Emergency Response Commitments. Preparation of Myanmar's NAPA is supported by the LDCF and UNEP (Vickers *et al.* 2010).

Tangible adaptation activities include the rehabilitation and reforestation of mangroves in the Ayeyarwaddy Delta region, where large areas of overexploited mangrove forests have disappeared. The Forest Department is implementing a number of forest conservation and development programs that have the potential to reduce the vulnerability of forest ecosystems to the impacts of climate change. These include, among others:

- Enactment of the new Forest Law in 1992; enactment of the Law on Protection of Wildlife, Wild Plants and Conservation of Natural Areas in 1994; promulgation of the Myanmar Forest Policy; and issuance of Community Forestry Instructions in 1995 which will contribute to the conservation of forest resources and reduce forest fragmentation; and
- A large reforestation program to reduce demands on natural forests for timber, industrial wood, and fuelwood, which will contribute to the conservation of biodiversity and reduction of forest degradation.

The Forest Department also initiated a special greening project for nine districts in 1994. The 2007 formation of a new Dry Zone Greening Department extended the project area to 13 districts. Currently there are 140 dams constructed in the Dry Zone with watershed areas of 4.5 million ha. Myanmar acceded to the United Nations Convention to Combat Desertification in January 1997 and has formulated a National Action Program to combat desertification.

Other Climate Change Projects and Programs

The Designated National Authority of Myanmar was established in 2006 for approving and providing information on proposed CDM projects. A small-scale afforestation/reforestation CDM project Community Reforestation Project in Mangrove Forest of Ayeyarwaddy Delta is being formulated with the objective of rehabilitating mangrove forests to mitigate climate change, conserve biodiversity, and support the livelihoods of local communities (Vickers *et al.* 2010).

The 1997 Myanmar Agenda 21 identified a number of activities to strengthen environmental education and awareness programs related to climate change, which were implemented during 2008-2010. These activities focused on strengthening education and training, particularly of Government officials and the media, developing information, education, and communication materials, and public awareness-raising campaigns.

Myanmar is conducting research programs in the areas of climate variability, climate change, tropical storms, drought and precipitation trends, and extreme climates in relation to El Niño, among others. Myanmar has also been researching issues relating to air pollution, oceanography, marine meteorology, and climate change in cooperation with ASEAN, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, India, China, the Republic of Korea, Thailand, and the United States; it also networks with a number of organizations such as the World Meteorological Organization, the Intergovernmental Panel on Climate Change (IPCC), UNFCCC, UNEP, The Economic and Social Commission for Asia and the Pacific (UNESCAP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and JICA to jointly undertake a wide range of projects and programs.

Institutions Involved in Climate Change

A Climate Change Information Network has been established within the NCEA with an initial 25 members from various Government departments and local NGOs, which is a firm foundation for promoting climate change information sharing and networking within and outside the country.

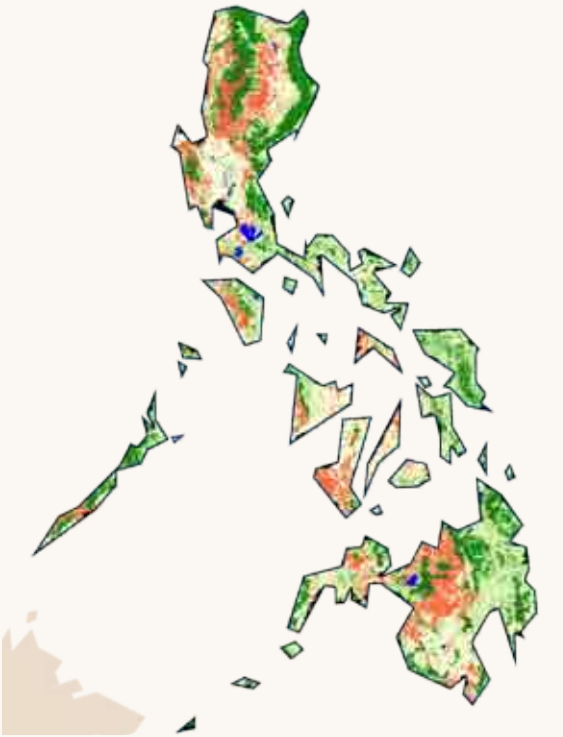
In recent years, there has been a substantial development in the formation of NGOs that are active in environmental matters, including climate change mitigation and adaptation related matters. These include the Forest Resource Environment Development and Conservation Association, the Biodiversity and Nature Conservation Association, Friends of the Rainforest Myanmar, the WCS, the Renewable Energy Association Myanmar, the Ecosystem Conservation and Community Development Initiative, and the Myanmar Academy of Agriculture, Forestry, Livestock and Fishery (Htun 2009).

Conclusion

Myanmar has a strong track record of SFM and a comprehensive forest policy and legal framework that allows for the participation of communities in forest management in order to meet their basic daily needs. This framework provides a strong basis for Myanmar to engage in social forestry activities as part of future climate change adaptation and mitigation initiatives. However, forest cover dropped from 57.9% in 1990 to 47.6% in 2005 (Htun 2009). Illegal logging is a serious issue, particularly in the border areas, which threatens the sustainability of forest resources and the development of the country generally. The Government faces many other challenges in the forestry sector, such as strengthening governance, reducing corruption, and ensuring the sustainability of the country's forest resources for future generations.

Although Myanmar has prepared its national Agenda 21, the integration of climate change concerns into sustainable development plans and programs has not yet been addressed. Robust climate change policy, strategies, and programs are needed. Capacity building and public awareness-raising on climate change are likewise needed, including school and community education programs on climate change mitigation and adaptation and disaster preparedness.

The Philippines



- Evergreen montane forest (>1,000 m)
- Evergreen lowland forest (<1,000 m)
- Evergreen wood and shrubland, and regrowth mosaics
- Other land
- Deciduous wood and shrubland, and regrowth mosaics
- Deciduous forest
- Swamp forest and inundated shrubland
- Mangrove forest
- Burnt, dry, or sparse vegetation
- Inland water

Key Statistics: The Republic of the Philippines	
Total population	91,983,102 in 2009 (World Bank*)
Rural population	31,586,997 in 2009 (World Bank*) 34% of total population
Total land area (excluding inland waterbodies)	29,817,000 ha
Total forested area	7,665,000 ha 25.7% of total land area
Production forest	5,861,000 ha 76.5% of total forest area
Protected forest – soil and water	613,000 ha 8% of total forest area
Protected forest – biodiversity conservation	1,1191,000 ha 15.5% of total forest area
Forest under community management	2,985,000 ha (in 2005) [34] 39% of total forest area
Carbon stocks	In above- and belowground living biomass: 663 million tonnes In litter: 16 million tonnes In soil: 498 million tonnes
Rates of deforestation (natural forest)	+52,000 ha on average per year from 2000-2005 +0.77% on average per year from 2000-2005
Social forestry policies/programs	Established by Executive Order 263 adopting CBFM as the national strategy for sustainable development of forest resources

[34] FAO data for 2005 indicate that communities hold management rights to 2,985,000 ha of forest. However a report presented at the 2009 ASFN Annual Meeting indicates this figure may now be much higher, with up to 6 mha of forestland now under community management (Lasco *et al*. 2010). Details are available at http://forestry.denr.gov.ph/ASFN1.htm accessed on 11 November 2010

Key Statistics: The Republic of the Philippines	
Climate change mitigation policies/programs	• Executive Order 774 – Reorganising the Presidential Task Force on Climate Change • Philippines National REDD+ Strategy (PNRPS) developed and approved by the Department of Environment and Natural Resources (DENR) in August 2010 • Philippines Climate Change Act, October 2009. RA 9729 • Executive Order 881 on REDD+ planning and development • UN REDD Programme observer partner and has receive funding for Readiness activities
Climate change adaptation programs/activities	• Executive Order 774 – Reorganising the Presidential Task Force on Climate Change • Various climate change adaptation projects implemented by the DENR and some local governments and international development partners

Map Source: Stibig, Beuchle, and Janvier, 2000.
Source: FAO Global Forest Resources Assessment 2010 (unless otherwise stated)
* World Bank indicators: see http://data.worldbank.org/indicator/
# See http://rainforests.mongabay.com/deforestation/2000/Philippines.htm

Social Forestry

Background

At the start of the twentieth century, approximately 70% of the Philippines' 30 mha of land was under forest cover. By 1950 this had declined to 50%.(Cruz and Pulhin 2006). Today, only 7.5 mha (approximately) of forest, covering around 26% of the country, remains (FAO 2010). This rapid deforestation is attributed to concession logging, illegal logging, land-use conversion, shifting cultivation or *kaingin* farming, high levels of rural poverty, and the migration of poor people from lowland areas to upland areas in search of cultivatable land and better economic opportunities.

In recent years, the Government has tried to improve forest management procedures with the introduction of Community-based Forest Management Agreements (CBFMAs), Industrial Forest Management Agreements, and Protected Area Community-based Resources Management Agreements.

Definition of Social Forestry (or Equivalent Terms)

The national strategy for managing forestland in the Philippines is CBFM. CBFM involves local communities in forestry activities for SFM, poverty alleviation, food security, empowering forest-dependent communities, promoting a stable and healthy environment, and conserving biodiversity. Agroforestry is the main CBFM model as it helps communities produce enough food, conserves natural resources, and prevents erosion in upland areas.

Status of Social Forestry in National Policy

The Philippines has comprehensive policy and institutional frameworks on natural resource management. Executive Order (EO) No. 263 made CBFM the official strategy for SFM and social justice in 1995. The law recognizes forest communities as legitimate managers of the nation's forests. Responsibilities for forest protection are transferred to organized local communities, represented by People's Organizations (POs), through CBFMAs for upland migrant communities and CADCs for indigenous peoples. The 1997 Indigenous People's Rights Act recognized the rights of indigenous people to ancestral forestlands.

A CBFMA legitimizes communities' rights to utilize forestlands for their livelihoods for renewable 25-year terms. It permits communities to harvest timber from plantations and second growth forests in line with sustainable harvesting regulations. A CADC recognizes indigenous peoples' ancestral rights to forestlands and to occupy, develop, manage, protect, and benefit from forestlands and other natural resources. Both types of agreement take a participatory and bottom-up approach to community-based natural resource development, management, and protection.

These policies were intended to secure community land-use rights and give local institutions the necessary authority to manage forests. However, weak institutional arrangements have hampered policy implementation, as has the failure to fully engage local stakeholders in forest management and decision-making. A study of six CBFM sites found that power, authority, resources, and management functions have not been sufficiently devolved to local government (particularly *barangays* or villages) and local communities. The responsibility for vital functions such as approval of management and utilization plans was retained within the DENR. Poor governance, weak institutions, limited resources, and monopoly of CBFM by elite groups present further challenges in CBFM implementation (Dahal and Capistrano 2006).

Trends in Social Forestry Implementation

According to 2004 Forest Management Bureau (FMB) figures, 6 mha of forestland are under some form of community forest management. Of this area, 4.7 mha have been issued with various forms of land tenure instruments, including 1,783 CBFMAs covering approximately 1.62 mha of land. The FMB estimates that around 690,000 households or over 4 million individuals are benefiting directly from CBFM (Lasco *et al.* 2010).

Key CBFM activities are reforestation and afforestation, agroforestry, watershed management, biodiversity protection, assisted natural regeneration, and mangrove rehabilitation. Other activities include capacity building of POs, community development and networking, participation of local government units, and market research and development.

Institutions Involved in Social Forestry

The DENR is the primary Government agency responsible for conservation, management, development, and proper use of the country's environment and natural resources. It aims to promote

sustainable development and enable stakeholders' participation in the protection, conservation, and management of natural resources for the benefit of present and future generations. The FMB provides support for the effective protection, development, management, and conservation of forestlands and watersheds.

The National CBFM People's Organization Federation is the umbrella organization for all national CBFM-POs, comprising 14 regional federations, 71 provincial federations, and 1,691 POs. The Federation represents the interests of more than 20 million forest residents.

The CoDe-REDD Philippines network is composed of forest-based communities and civil society organizations working for livelihoods, pro-conservation, and pro-community development projects in Philippine forests.

The ASFN Focal Point is the Head of the CBFM program. ASFN focal points were actively engaged with CoDe-REDD in the preparation of the PNRPS. CoDe-REDD partners such as the Non-Timber Forest Products Exchange Programme and Programme for the Endorsement of Forest Certification have also been nominated to sit on the CBFM steering committee, although this has not yet been convened.

Climate Change Mitigation and Adaptation

Background

The Philippines is considered to be highly susceptible to the effects of global warming. Located in the typhoon belt, the country's thousands of islands and long coastline are at high risk from sea-level rises and increases in the frequency and intensity of tropical storms and typhoons. The country is also vulnerable to heat-waves, droughts, and floods. The poor are particularly vulnerable as many live in hazard-prone areas and depend upon natural resources for their livelihoods.

REDD+ Strategy Development

The Philippines currently has observer status in the UN-REDD system, but is making considerable progress towards implementation of REDD+.[35] The UN-REDD Programme recently approved a project for US$500,000 on REDD Readiness in the Philippines (CoDE REDD 2010). The National REDD Plus Strategy (PNRPS) has recently been developed with the engagement of a wide range of stakeholders. The PNRPS was approved by the DENR in July 2010 and represents a major step forward in the Philippines' readiness to engage in REDD+ projects. The involvement of the Climate Change Commission led to the integration of REDD+ into Section 8.5 of the National Framework Strategy on Climate Change, and to Executive Order 881 on REDD+ planning and development.

[35] In early November 2010 the UN-REDD Programme agreed to provide the Philippines with around US$4 million for REDD+ activities. See http://ntfp.org/coderedd/un-redd-approves-philippines%e2%80%99-redd-readiness-proposal/ accessed on 9 December 2010.

The PNRPS envisions empowered forest managers who are able to sustainably and equitably manage forestlands and ancestral domains for forest conservation, enhanced carbon stocks, and reduced GHG emissions. The Strategy includes an overview of the forestry sector, a review of national policies, and outlines the necessary steps to improve REDD+ Readiness. It aims to inform stakeholders, encourage participation, and lay the foundations for development of a future targeted action plan. It also helps to prepare forest managers to implement future REDD+ projects and activities with the support of international, national, and local stakeholders and proposes a range of activities to further prepare for engagement in REDD+ during the period 2010-2020. These activities include a review of existing legislation, creation of a legal framework and enabling policies, strengthening of governance and institutions, and integrating REDD+ into other sectors, particularly national climate change mitigation efforts. The Strategy recognizes the need to build capacity, awareness, communication, and coordination among a wide range of stakeholders to help them effectively engage in implementation of REDD+. It also outlines the need for more scientific research to support improved planning, clarity of land and carbon tenure, equitable sharing of benefits, setting of baselines, and facilitating design, monitoring, and implementation of REDD+ projects, as well as the need to secure sustainable financing for REDD+ activities. As such it lays out a comprehensive road map for moving forward with REDD+.

The PNRPS has a strong focus on community engagement and aims to capitalize on the existing decentralized forest governance systems and build upon existing institutional structures. It may offer an opportunity to strengthen CBFM in terms of promoting sustainable livelihoods and income, improving forest area and quality, and enhancing social equity in forest management.

Four REDD+ pilot projects have already started in Quezon and Palawan provinces with funding from the European Commission and Team Energy respectively, and in Panay and Leyte provinces with funding from GIZ.

Challenges in REDD+ implementation are likely due to the weak capacity of the CBFM POs and federations, as well as the technical nature of REDD+. The proposed governance structures may have to 'recentralize' decision-making, thereby disempowering local communities (Pulhin 2010). Recent data from the DENR indicate that the overall rate of deforestation on a national level may be declining, meaning that the Philippines may only be able to make payments for reducing emissions from forest degradation (Lasco *et al.* 2010). However, deforestation on a sub-national level still occurs in provinces such as Palawan, Agusan, and Surigao. Furthermore the definition of 'deforestation' used also has a bearing upon determining the deforestation rate of the Philippines. These issues require further clarification to determine the strategies of engagement and potential benefits from REDD+.

National Climate Change Mitigation Activities

The Philippines has been one of the countries at the forefront of climate change mitigation in the ASEAN region.

The creation of the Inter-Agency Committee on Climate Change in 1991 helped coordinate climate change activities, develop climate change policies, and prepare the Philippine position for the UNFCCC.

The National Greenhouse Gas Inventory of 1994 provides a basis for future plans on mitigation. The Strategic Objective Agreement 5 or the Philippine Climate Change Mitigation Program aimed to slow the growth of GHG emissions through the use of clean fuels and improved energy efficiency.

The 1997 National Action Plan on Climate Change provides guidance on mitigation priorities and aims to integrate climate change concerns into the Government's development plans, design 'no regrets' mitigation measures, and develop adaptation responses.

In February 2007, the Presidential Task Force on Climate Change was established to address mitigation of emissions and adaptation.

The 2009 National Climate Change Act created the Philippine Climate Change Commission, with the aim of mainstreaming adaptation and mitigation into Government policy and preparing the country to respond to climate change.

Around 56% of the country's emissions come from land-use change and forestry (CAIT 2008).[36] A recent study estimated that the 525,000 ha of agroforestry land in the Philippines may store up to 25 mega tonnes of carbon (MtC) and sequester a further 2.7 MtC every year (Lasco *et al.* 2010). As noted above, CBFM is well established in the Philippines, and CBFM can therefore play an active role in climate change mitigation and adaptation through development of agroforestry farms and tree plantations, forest protection, reducing the burning of forests, networking, advocacy and raising awareness, project adoption and implementation, and monitoring and auditing.

National Climate Change Adaptation Activities

Due to its vulnerability to climate change, the Philippines places emphasis on adaptation. In addition to the national-level mitigation and adaptation initiatives listed above, the Philippine Government is actively engaging in climate change adaptation activities at the local level. The Albay Provincial Government has developed its own climate change adaptation strategy and launched various adaptation activities, such as clean-up of rivers, creeks, and waterways, agricultural rehabilitation programs, tree planting, and mangrove rehabilitation, as well as conducting awareness-raising and education campaigns on climate change adaptation and disaster management.

Other Climate Change Projects and Programs

CBFM groups, with the support of POs, have developed proposals for climate change mitigation projects where CBFM is being used to rehabilitate forest ecosystems and generate tradable carbon credits under the CDM. Such projects include the LLDA-Tanay Streambank Rehabilitation Project, Conservation International's Sierra Madre Project, and the Kalahan Forestry Carbon Project (Lasco *et al.* 2010). But at the time of writing, none of these projects have been formally approved or registered on the CDM database. Initial experiences with the CDM highlight some major challenges with

[36] Climate Analysis Indicators Tool (CAIT) Version 5.0. (Washington, DC: World Resources Institute, 2008).

afforestation/reforestation projects, including the high transaction costs involved, which are unlikely to be fully recovered by the sale of the carbon credits, as well as the complexity of project rules and regulations. Many people in the Philippines are sceptical about opportunities for CBFM under the CDM, and hope that REDD+ can present a different approach.

Institutions Involved in Climate Change

The National CBFM People's Organization Federation represents the interests of more than 20 million forest residents. Although organizationally weak, the Federation could be a key player in safeguarding community rights, ownership, and participation in the context of REDD+.

Civil society in the Philippines is relatively robust. NGOs played a leading role in the formation of the CoDe-REDD network and the preparation of the PNRPS. They are likely to be key players in supporting the implementation of REDD+ as well.

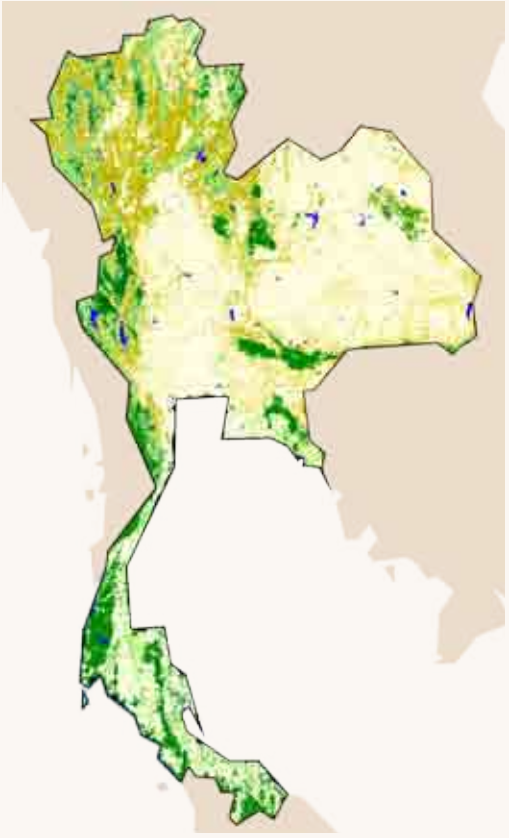
Conclusion

The Philippines represents a strong opportunity for piloting and development of REDD+ projects. The legal and institutional framework already exists for community engagement in SFM. With technical support, CBFM groups and POs would be able to implement REDD+ projects. The country also has a strong research community and a robust civil society that are capable of supporting REDD+ development at various levels.

Previous reforestation attempts by the DENR, private operators, and CBFMAs have met with limited success. Some plantations were reportedly destroyed by drought, fire, floods, storms or stray animals, others by the 1991 eruption of Mt. Pinatubo. A further reason reported for the low survival rate of plantations was inadequate maintenance and protection. Reforestation efforts, at least in terms of plantation development, may need to be strengthened if forest cover is to be significantly increased for climate change mitigation.

Through the development of the PNRPS, there has been significant progress towards REDD+ Readiness. The community-focused strategy aims to make use of decentralized forest governance, build upon existing CBFM institutional structures, and adopt participatory planning and multi-stakeholder approaches.

Thailand



- Evergreen montane forest (>1,000 m)
- Evergreen lowland forest (<1,000 m)
- Evergreen wood and shrubland, and regrowth mosaics
- Other land
- Deciduous wood and shrubland, and regrowth mosaics
- Deciduous forest
- Swamp forest and inundated shrubland
- Mangrove forest
- Burnt, dry, or sparse vegetation
- Inland water

Map Source: Stibig, Beuchle, and Janvier, 2000.

Source:
FAO Global Forest Resources Assessment 2010 (unless otherwise stated)

* World Bank indicators: see http://data.worldbank.org/indicator/

\# See http://rainforests.mongabay.com/deforestation/2000/Philippines.htm

Key Statistics: The Kingdom of Thailand	
Total population	67,764,033 in 2009 (World Bank*)
Rural population	44,954,660 in 2009 (World Bank*) 66% of total population
Total land area (excluding inland waterbodies)	51,089,000 ha
Total forested area	18,972,000 ha[37] 37% of total land area
Production forest	2,653,000 ha 14% of total forest area
Protected forest – soil and water	1,332,000 ha 7% of total forest area
Protected forest – biodiversity conservation	8,853,000 ha 47% of total forest area
Amount of forest area under community management	194,000 ha (Wichawutipong 2005) 1% of total forest area
Carbon stocks	In above- and belowground living biomass: 881 million tonnes In litter: data not available In soil: data not available
Rates of deforestation (natural forest)	-91,000 ha per year -0.57% per year #
Social/community forestry programs/ activities	Community Forest Bill (a draft Bill passed in 2007 but has not yet been endorsed)
Climate change mitigation programs/ activities	• R-PIN approved by the FCPF in March 2009 • Strategic Plan on Climate Change (2008-2012), approved in January 2008 • Proposed ONEP Master Plan for Climate Change (not yet approved due to objections from civil society organizations) • Bangkok Climate Change Action Plan
Climate change adaptation programs/ activities	• Strategic Plan on Climate Change (2008-2012) approved January 2008

[37] Including rubber plantations

Social Forestry

Background

The Kingdom of Thailand's forests contain rich floral, faunal, and cultural diversity. There are two main types of forests in Thailand: evergreen forest and deciduous forest.

Forest resources have been an integral part of Thailand's rural life. It is estimated that at least five million people depend on forest resources for their livelihoods, mostly in the north and northeastern parts of the country. Up to two million people live in and around protected areas and a further 20 to 25 million people use the national forest reserves for forest products for household consumption and cash income (FAO 2009a).

During the 1960s and 1970s, timber extraction, subsistence farming, and commercial agriculture caused widespread deforestation. It is estimated that forest cover declined from 53% of the total country area in 1961 to 25% in 1998. The current forest area is estimated to be 18,972,000 hectares or 37% of the total land area (including, rubber plantations covering 2,591 hectares). Mangrove forests have also declined from 320,000 ha to 240,000 ha during the past 40 years (FAO 2009a). Growing realization of the importance of forests for environmental protection, ecosystem services, and livelihoods led to the introduction of a logging ban in 1989 to protect the remaining areas of forest. Nonetheless, deforestation and forest degradation continue due to demand for land for agriculture and development (MNRE 2009). In 1991, the PFE was reported to cover 23.5 mha, although much of this area was already without forest cover. By 2001, the PFE had declined to half this size due to conversion to agricultural land and expansion of settlements and infrastructure. There were only around 9.5 mha of protected forest remaining in 2010 (FAO 2010). Poverty is considered the most significant underlying cause of deforestation in the country (FAO 2009a).

The 10th National Economic and Social Development Plan (2007–2011) sets a target of maintaining at least 33% of the total area under good forest cover, of which 18% should be protected area. It sets a target of 464,000 ha for restoration of protected areas (MNRE 2009).

Definition of Social Forestry (or Equivalent Terms)

The 1996 draft Community Forest Bill states that local people can use a community forest to collect dry and dead wood products, grow certain plants, rear livestock, and hunt animals which are not reserved, protected, rare or endangered. They cannot engage in destructive activities such as shifting cultivation or fell or harvest any living trees from natural forests. However, people are entitled to use plantation forests to harvest timber and fuelwood, although a Royal Forest Department (RFD) permit is required for reserved species such as teak. Villagers are also allowed to collect NTFPs such as mushrooms, rattan, bamboo and bamboo shoots, wild vegetables, flowers, fruits, nuts, and medical plants for household consumption and cash income (FAO 2009a).

Status of Social Forestry in National Policy

All natural forests in Thailand are owned by the State and managed by the Government. The Government has issued various types of tenure rights for people living in national forest reserves. Establishment of community forests is currently permitted in national forest reserves, which are under formal management by the RFD, and other forests not yet occupied or developed for use (Wichawutipong 2005). Local communities have no formal use rights in protected areas, although they are allowed to collect some basic forest products, such as dry fuelwood and some NTFPs for household use, with permission of the Department of National Parks, Wildlife, and Plant Conservation. There are over 20 laws and a number of Cabinet decisions relating to forest management in Thailand. The 1992 Thai Forestry Sector Master Plan recognized community forestry as one of the main strategies for forest management, but this has not yet been formally endorsed. The revised Constitution of 1997 recognizes the rights and roles of Thai people to participate in the development of national policy relating to natural resources and the environment, and recognizes the rights of civil society organizations in managing natural resources (FAO 2009a).

The process of developing community forestry legislation began in 1991. Several versions of the Community Forestry Bill have since been drafted. However, lack of consensus on allowing community forestry inside protected areas has delayed the enactment of the Bill. In November 2007, the most recent draft of the Community Forestry Bill was challenged on the grounds that it would infringe upon indigenous peoples' Constitutional rights and potentially exclude 20,000 communities living in or around protected forests from accessing their existing community forestlands (RECOFTC 2008).[38] The Constitutional Court declared that the Bill could not be enacted because it had received less than one-third of parliamentary votes.

Trends in the Implementation of Social Forestry

Community (or village) forestry has long been a part of life for Thailand's rural communities. The RFD recognized it as an official strategy for forest management in the 1970s as did the Forest Sector Master Plan in 1992. In 1991, a Community Forestry Division was created to promote community forestry (FAO 2009a).

As of 2005, 11,400 villages (15.5% of all villages) were involved in managing community forests (Wichwutipong 2005). Of these, over 5,331 villages have formally registered their community forestry programs with the RFD, covering an area of around 196,667 ha of national reserve forests and other forest areas, and representing 0.7% of all villages in the country.[39] However, only about 1.16% of the total forest area has so far been brought under community management (FAO 2009a; Wichwutipong 2005).

[38] See http://www.rightsandresources.org/blog.php?id=34 accessed on 26 November 2010.

[39] In addition there are many community forests which are not be registered under the RFD as they are located in or around protected areas.

The RFD has identified and piloted different models for community forestry that can be scaled up once the Community Forestry Act is passed. These include:

- Community forestry in buffer zones in forest reserves surrounding national parks and wildlife sanctuaries, with the aim of developing processes and tools for collaborative management arrangements between local organizations and the RFD;
- Small-scale areas for reforestation to support Tambon[40] Authority Organizations (TAOs) to promote small-scale enterprises and employment;
- One Tambon One Product (OTOP) supports local communities to develop value-added products from trees and plants that have potential for commercialization, such as wine, fruit juice, honey, and medicines; and
- Forest fire protection involving local people. The RFD has supported TAOs in developing fire control plans to reduce the impact of forest fires on local economies and forests.

Seventy-two percent of community forests are located in the North and Northeast of Thailand, where most natural forests and poor communities are located (IUCN 2004). These communities are mostly indigenous or hill-tribe people and many are thought to be illegal immigrants and have no formal land rights in Thailand. Many of these communities live in and around protected areas. Their numbers are increasing due to continued immigration from Myanmar, Lao PDR, and Cambodia. Forest authorities and some environmental NGOs regard their land-use practices as a major cause of deforestation and forest degradation, and have little confidence in these communities as custodians of the country's forests. They object to community forestry in protected areas on the grounds that it will lead to further degradation of remaining forests (FAO 2009a).

Institutions Involved in Social Forestry

The Thai Ministry of Natural Resources and Environment (MNRE), founded in 2002, is responsible for the protection of natural resources. It has the following departments relating to forestry:

- The RFD was originally established in 1896 to consolidate the exploitation of forests. The RFD is responsible for management of forests outside protected areas, known as 'forest reserve land'. The Bureau of Community Forest Management was created in 2003 to deal with community forestry issues outside protected areas;
- The Department of National Parks, Wildlife, and Plant Conservation has responsibility for forestland in protected areas;
- The Department of Coastal and Marine Resources is responsible for management of coastal flora and fauna, including mangrove forests – many of which are managed by local communities; and
- The Forest Industry Organization, under the RFD, is in charge of forest plantations.

[40] A local government unit.

In 1991 the Community Forestry Division, now renamed the Office of Community Forest Management, was created to promote community forestry and involve local communities, local organizations, NGOs, and other civil society organizations in local forest management.

Civil society groups have been involved in community forestry since the 1990s, when they supported to rural communities in voicing their concerns over the Community Forest Bill. NGOs active on social forestry issues include the Thailand Environment Institute, the Foundation of Education for Life and Society, the Seub Nakhasathien Foundation, the Promotion of Human Resources for Community Development Foundation, the Village Foundation, the Serving for the People Association, the World Wide Fund for Nature, Thailand, and RECOFTC. Many NGOs actively encourage community involvement in planting trees and protecting forests in watershed areas. In addition, thousands of monks reported to reside inside the forests often cooperate with forest authorities to encourage villagers to protect the forest.

Climate Change Mitigation and Adaptation

Background

As with other countries in the region Thailand is at risk from sea-level rise, higher temperatures, more frequent droughts, and changes in rainfall patterns which are likely to affect agriculture and cause increased levels of flooding. The agriculture sector, which employs 49% of the population and contributes 10% of the GDP, is most at risk. Thailand is the world's largest exporter of rice, producing around 20 million tonnes per year, or about one-third of global supply, which could be seriously affected by climate change.

The IPCC has placed Bangkok among 20 of the world's major cities at risk from climate change. The city sits about 2 metres (6.5 ft) above sea level and has experienced problems with subsidence for many years. Climate change may exacerbate this problem and bring greater levels of floodwater flowing down the Chao Phraya River during the monsoon season, as well as inundation from rising sea levels and increased risks of tidal or storm surges.

REDD+ Strategy Development

Thailand submitted its initial R-PIN to the FCPF in December 2008. A revised version submitted in February 2009 was approved in March 2009. The R-PIN outlines six key activities that will be needed in order to prepare for REDD+ implementation:

1. Identification of a national institution and working group on REDD+.
2. Updating and improving the National Monitoring Data and Forest Resource Information service and strengthening collaboration between Government institutions.
3. Increasing public awareness and capacity building on forest conservation.
4. Conducting a REDD workshop on identification of hotspot areas in the four regions of Thailand.

5. Scaling up ongoing poverty reduction, biodiversity conservation, and restoration programs.
6. Collaborating with other countries of the Greater Mekong Sub-region (GMS) on REDD implementation.

Proposed strategies to secure resources for REDD+ implementation include:

- National capacity building for REDD+;
- Carbon cycle assessments and relevant research;
- Emission reduction in pilot sites, such as the Tenasserim Biodiversity Corridor;
- Collaboration with GMS countries on REDD Readiness implementation; and
- Stakeholder consultations related to REDD+ strategy.

The Tenasserim Biodiversity Corridor project covers the largest continuous stretch of primary forest in Thailand. It is an internationally recognized site for biodiversity and a global priority area for tiger conservation. It also contains considerable stocks of carbon. A community-based SFM project has been operational since 2006, and there are plans to develop this further by linking it to funding opportunities through REDD+ (R-PIN 2009).

However REDD+ is a controversial issue in Thai society because the questions of indigenous peoples' access to protected forestlands have not yet been resolved. In order to make broad progress with REDD+ initiatives, it will be necessary to address these issues and to ensure that local people receive adequate benefits from forest protection efforts.

National Climate Change Mitigation Activities

In 2005 Thailand was ranked as the 27th largest contributor to global GHG emissions (CAIT 2010).[41] From 2005 calculation, it appears that emissions from the energy sector were the greatest at 144,475,000 tonnes, accounting for 69% of total GHG emissions. Emissions from land-use change and forestry were estimated to be 24% of the total (MNRE 2009).

The Cabinet approved Thailand's Strategic Plan on Climate Change (2008-2012) in January 2008. It outlines likely impacts of global warming on key sectors of the economy and the country's natural resources. It suggests mitigation activities such as energy efficiency and reducing GHG emissions from the transport sector. Bangkok also has a Draft Action Plan to respond to climate change, including reducing CO_2 emissions from transportation by improving mass transit and promoting alternative fuels. Thailand is in the process of preparing its National Forestry-Climate Change Strategic Plan.

ONEP has developed a draft National Master Plan on Climate Change for 2010-2019 which proposes climate change mitigation and adaptation activities. Civil society organizations have criticized the

[41] Climate Analysis Indicators Tool (CAIT) Version 7.0. (Washington, DC: World Resources Institute, 2010).

draft plan for failing to set targets for emissions reductions, neglecting the industry and energy sectors, pursuing REDD+ despite no resolution of issues relating to indigenous rights and community forests, and its lack of measures to promote adaptive capacity and resilience of small-scale farmers and fisherfolk.

National Climate Change Adaptation Activities

Existing adaptation plans in Thailand include the construction of a flood prevention wall around Bangkok to protect the city from flooding and developing drought mitigation plans. NGOs such as Oxfam are supporting local-level adaptation activities in the Northeast, such as building wells and water storage ponds, installing pumping and drainage systems, and helping farmers to introduce new crops to diversify their livelihoods.

In 2010 Thailand experienced widespread flooding across the country, as well as its worst drought in 20 years leading to severe water shortages in 53 provinces, which affected 6.5 million people and thousands of hectares of agricultural land (Guerin 2003). This highlighted the urgent need to develop comprehensive national plans on climate change mitigation, adaptation, and weather-related disasters.

Other Related Projects and Programs

According to the RFD, Thailand has 276,000 ha of mangrove forest covering 70% of its coastline (FAO 2009a). The potential role of mangrove forests in mitigating the impact of storms and tidal surges is well documented. Although mangrove areas in southern Thailand have been cleared and developed for shrimp farming and coastal development, new concessions in mangrove forests have ceased in the last two to three years. From 2004 to 2009, the Department of Marine and Coastal Resources (DMC) carried out a project to plant 60,000 ha of mangrove forests and grant community access for aquaculture. The Government also funds the People's Participation Program which encourages participation of local people in mangrove planting, training, and awareness-raising activities (FAO 2009a).

Institutions Involved in Climate Change

National Committee on Climate Change was established in September 1993, following Thailand's ratification of the UNFCCC. The Committee falls under the supervision of the National Environmental Board. Committee members include senior officials of the principal line ministries, agencies or departments. The Committee develops national policy on climate change which is integrated into the five-year national plans formulated by the NESDB and advises the Government on matters relating to the Convention.

ONEP is involved in planning climate change mitigation and adaptation activities.

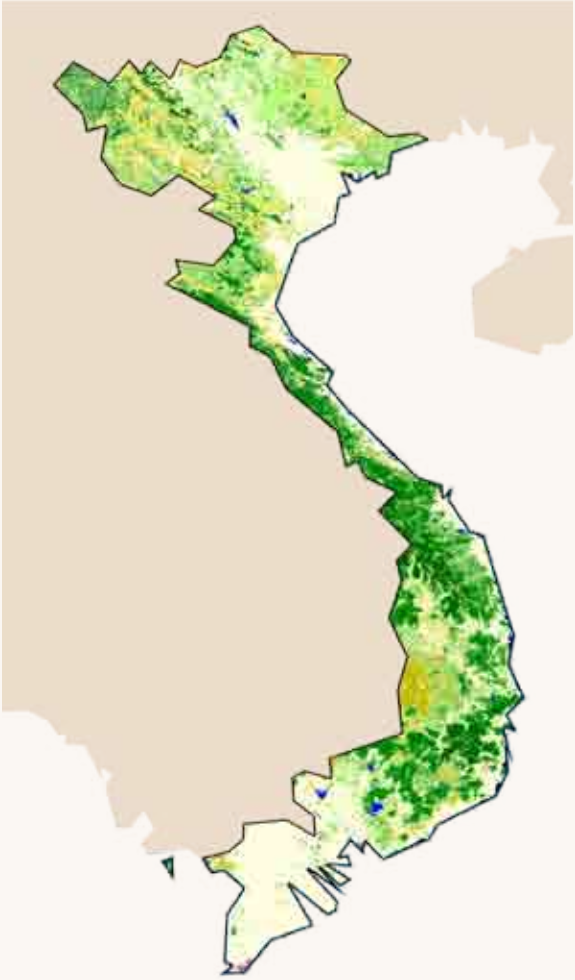
Conclusion

As with other countries in the region, climate change may have serious impacts on Thailand. The country has begun to develop mitigation and adaptation strategies, particularly for the low-lying Bangkok metropolitan area. However, much more needs to be done.

There is great potential for social forestry in Thailand. But progress towards community forestry implementation has stalled due to lack of agreement on permitting community forestry in protected areas. Deforestation and forest degradation continue due to rising population, agricultural expansion, and the dependence of indigenous people on forest resources. Without a Community Forestry Bill in place, it has been difficult to develop formal procedures and guidelines for implementation of community forestry. Unless this situation can be resolved, it may prove difficult to establish the necessary policy and legal frameworks for implementation of REDD+ initiatives.

If social forestry is to play a role in climate change adaptation and mitigation strategies, issues of citizenship, constitutional rights, and access to land need urgent attention. REDD+ may present new opportunities to help to reverse the trend of deforestation by providing new incentives for forest protection. In order for REDD+ to be effective, development of equitable benefit-sharing mechanisms will be essential, in order that indigenous communities living in and around forests receive tangible rewards for forest protection.

Vietnam



- Evergreen montane forest (>1,000 m)
- Evergreen lowland forest (<1,000 m)
- Evergreen wood and shrubland, and regrowth mosaics
- Other land
- Deciduous wood and shrubland, and regrowth mosaics
- Deciduous forest
- Swamp forest and inundated shrubland
- Mangrove forest
- Burnt, dry, or sparse vegetation
- Inland water

Key Statistics: The Socialist Republic of Vietnam	
Total population	87,279,754 in 2009 (World Bank*)
Rural population	62,562,128 in 2009 (World Bank*) 72% of total population
Total land area (excluding inland waterbodies)	31,0007,000 ha
Total forested area	13,797,000 ha 44.5% of total land area
Production forest	6,524,000 ha 47.3% of total forest area
Protected forest – soil and water	5,131,000 ha 37.2% of total forest area
Protected forest – biodiversity conservation	2,142,000 ha 15.5% of total forest area
Forest under community management	3,300,000 ha (Nguyen *et al.* 2010) 24% of total forest area
Carbon stocks	In above- and belowground living biomass: 992 million tonnes In litter: 72 million tonnes In soil: 651 million tonnes
Rates of deforestation (natural forest)	Average +61,000 ha per year 2005-2010 Average +0.63% per year 2005-2010 #
Social/community forestry policies/ programs	Community Forest Management (CFM), recognized under the 2004 Law on Forest Protection and Development National Pilot program on CFM between 2006 and 2009

Map Source: Stibig, Beuchle, and Janvier, 2000.
Source: FAO Global Forest Resources Assessment, Country Report 2010 (unless otherwise stated)
* World Bank indicators: see http://data.worldbank.org/indicator/
\# See http://rainforests.mongabay.com/deforestation/2000/Vietnam.htm

Key Statistics: The Socialist Republic of Vietnam	
Climate change mitigation policies/programs	• National Target Program (NTP) on Climate Change • UN-REDD partner country • CDM – A/R in Hoa Binh Province (funded by JICA/Honda) • PES – National PES Pilot Policy (Decision 380) with pilot projects in Lam Dong (Winrock International) and Son La (GIZ). • Pilot project in Bac Kan Province under Rewarding Upland Poor for Environmental Services (RUPES) • National policy to upscale PES nationwide in effect from January 2011 • National REDD program development underway
Climate change adaptation policies/programs	• NTP on Climate Change • Action Plan Framework for Adaptation to Climate Change (MARD 2008)

Social Forestry

Background

During the second half of the twentieth century, large-scale agricultural expansion and timber extraction caused widespread deforestation in Vietnam. Forest coverage in Vietnam reached its lowest level in the early 1990s, leading to the subsequent implementation of national reforestation programs.

Vietnam has 19 mha that are officially designated as forestland. Roughly two-thirds of this area is under forest cover, with the remaining one-third consisting of degraded hillsides and barren lands. At the end of 2009, Vietnam was estimated to have 13.2 mha of forested land. Of this, approximately 10.3 mha were natural forest and with plantation forests making up around 2.9 mha (www.keimlam.org).

Forests in Vietnam are divided into three classification types:

- Special-use forests (SUFs) are mainly protected areas used for nature conservation, cultural heritage or tourism. According to 1999 figures, there are slightly less than 2 mha of SUFs, making up 15% of the total forested area.
- Protection forests are designated for the protection of soil and water, in order to prevent erosion, protect water supplies, and mitigate natural disasters. In 2009, there were approximately 4.8 mha of protection forest, representing 36% of the total forested area.
- Production forests are mainly for supply of timber and NTFPs and amounted to 6.2 mha, 36% of the total forested area in 2009. (www.keimlam.org).

Definition of Social Forestry (or Equivalent Term)

The starting point for social forestry in Vietnam was the introduction of the 'people-centered forestry' ideology in the early 1990s. Social forestry in Vietnam takes the form of CFM. Key principles of CFM in Vietnam include decentralization of forest management, forestland allocation to households, groups of households and communities, particularly poor ethnic minority communities who depend on forest resources for their livelihoods, and the development of pro-poor forest management activities. Forest management under CFM includes timber and NTFP utilization, enrichment of natural forests, afforestation of barren lands, and environmental services (Wode and Huy 2009).

Status of Social Forestry in National Policy

According to the Constitution of Vietnam, land and forest resources (including land, trees, and wildlife) are owned by the people of Vietnam and are managed by the State on their behalf. The State may grant land and forest use rights to specific groups or individuals, such as State-owned companies, People's Committees, households, or Forest Management Boards for protection forests and SUFs.

Forest communities in Vietnam have practiced CFM for generations, but it was not officially recognized in national law or policy. Since the early 1990s, forest use rights could be allocated to individuals and households (Heimo 2010) under the Forest Protection and Development Law 1991, Land Law 1993, and Decree 02/CP of January 1994. The 2004 Law on Forest Protection and Development provided the legal basis for allocation of forests to entire communities and officially recognized CFM. Both the 2004 Law on Forest Protection and Development and the 2003 Land Law emphasized the importance of CFM, the role of local people, and use of traditional forest management practices, for SFM and poverty alleviation. The introduction of CFM often takes place alongside allocation of forestland rights to the local communities through land-use rights certificates (so-called Red Books for long-term landownership, and Green Books for annual forest protection agreements).

The Department of Forestry initiated a pilot project in 2007 to test newly developed Guidelines for Community Forest Management. It allocated natural forest areas to local communities in a total of 40 communes in 10 provinces. The outcome of the project will help to determine the Department's strategy for policy reform and implementation of CFM (Gilmour and Doan Diem 2008).

Trends in Social Forestry

Since the early 1990s, there has been a gradual shift from centralized State forest management towards CFM, with forest resources increasingly being allocated to individual households, groups of households, and communities. Under these reforms, forest area officially under the management of local people has grown from almost nothing in the early 1990s to nearly 3.5 mha, or 27% of the national forest area, in 2006 (Nguyen *et al.* 2008b). However, policy implementation has encountered significant challenges. It is not yet clear how effective it has been in practice.

Although many communities have rights to manage forestland, many people are not fully aware of these rights due to political and social marginalization. CFM has not yet been formalized on a large scale and as yet there is no Government program supporting CFM.

In many cases, forestland allocation has not been carried out clearly and effectively. This is partly due to the confusion and conflict caused by different classification systems used by the Ministry of Agriculture and Rural Development (MARD) for forest categorization and by the Ministry of Natural Resources and Environment (MoNRE) for land-use classification. Limited human and financial resources, outdated information, and limited site visits constrain mapping and allocation. Moreover, local people are rarely involved in the mapping and allocation process, which causes further confusion and conflict over boundaries. Many communities do not yet possess clear land-use certificates for the forest areas they are using, leading to competing land claims and a lack of security on the part of the forest users. This contributes to deforestation, as people have very few incentives to protect the forests for the future.

There are also regional differences in the processes and status of forestland allocation. In the Central Highlands, which have some of the best quality forest cover, forestland allocation to households and communities lags behind the north. Forests which are allocated to households and communities are often already degraded and do not provide the expected benefits for communities. Furthermore, the allocation of the land-use rights has often been considered as the final stage in the process. Limited information or training is provided to new forest owners about their roles or responsibilities for SFM. Although forest managers are legally required to submit management plans to the authorities for monitoring and regulation, no training or technical guidelines are available to help communities prepare these plans.

Forest protection activities under reforestation programs such as Programme 661 (also known as the Five Million Hectares Reforestation Programme) focus on paying local communities a small fee to conduct forest patrols under the supervision of the protected area management boards. The fees paid are insufficient to provide incentives for forest protection. Local people do not have meaningful long-term access rights or security of tenure and do not feel a sense of ownership over these forests (Sikor and Nguyen 2010).

CFM is also a new concept for the Government forest agencies. There is often a lack of resources and administrative capacity to effectively plan, manage, and monitor forest utilization. In addition Government officials often look at CFM from the State forestry point of view. As a result, both Government agencies and local people have limited understanding of their rights and responsibilities, and lack sufficient technical capacity in SFM planning, decision-making, and benefit-sharing.

Institutions Involved in Social Forestry

MARD is responsible for forest management at the national level. Within MARD, the Directorate of Forestry (DoF) is responsible for forest management, forest protection, and forest law enforcement. The former Department of Forestry and the Forest Protection Department merged in March 2010 to create the DoF.

The Department of Agriculture and Rural Development at the provincial level has the role of advising and supporting the Provincial Peoples' Committee in managing State forests.

The Forest Development Sub-Department is responsible for developing forest policy frameworks and approval of procedures and techniques for CFM implementation, including standards for forest management planning and approving forest management methodologies. It only exists at the provincial level.

Forest management boards and forest protection boards are district- (or higher) level organizations responsible for forest protection duties or forest management.

The Commune People's Committee is responsible for forestry tasks. In recent years some of these committees in upland areas have established a Commune Forestry Board to oversee forestry issues within the commune.

State Forest Companies, formerly known as State-owned enterprises, are also engaged in commercial forestry activities. For instance, VinaFor, a large State-run corporation, engages in timber processing and furniture production.

Local-level civil society organizations in Vietnam are relatively undeveloped compared to other Southeast Asian nations. Grassroots organizations, community-based organizations, and NGOs are few in number, although mass organizations do exist – for instance the Women's Union and the Farmers' Union, which help communicate State policy to local people.

There are a number of international agencies working in forestry in Vietnam, including the World Bank, ADB, the KfW, and JICA, which have implemented many projects supporting community forestry in several provinces. There are also a number of international NGOs working in relevant areas such as RECOFTC, WWF, FFI, Birdlife International, Conservation International and CARE. Vietnam also has a strong research community, with a number of competent research institutes working in forestry-related areas.

Climate Change Mitigation and Adaptation

Background

With its long coastline, low-lying river deltas, steep mountain ranges, and an economy based upon natural resources, Vietnam is highly vulnerable to the impacts of climate change and natural disasters. Sea-level rise, higher temperatures, more frequent and extreme weather events, such as floods, droughts, and typhoons are predicted and are likely to have a considerable impact on the country's economy and people, particularly poor people. The Government has initiated measures to facilitate climate change adaptation and mitigate disaster risks through a National Strategy for Disaster Prevention and a National Target Program for Climate Change. MARD is currently developing an action plan to implement the NTP under MoNRE.

REDD+ Strategy Development

Vietnam is one of the 29 countries eligible for funding under the World Bank's FCPF, and is a partner country in the UN-REDD Programme. A 2010 UN-REDD Programme study estimated that, if implemented effectively, REDD+ could generate around US$80-100 million per year for Vietnam (UN-REDD 2010). The study also highlighted a range of legal, institutional, and governance policy issues that need to be addressed in order to comply with REDD regulations. The UN-REDD Programme is currently assisting Vietnam to build its capacity to implement REDD+, in particular through the development of an equitable benefit distribution system.

The Vietnam UN-REDD Programme is also implementing a consultation process to seek FPIC from local communities in two pilot districts, Lam Ha and Di Linh. The process includes preparation of a legal summary on local community engagement and FPIC; consultation and awareness-raising activities with provincial, district and commune leaders, village heads, and the Women's and Youth Unions; engagement of interlocutors able to communicate in ethnic minority languages; village meetings; and dissemination of communications materials including posters, brochures, videos, radio and TV broadcasts in Vietnamese and local languages, to increase local understanding of climate change, the concept and principles of REDD+, and the proposed activities of the UN-REDD Programme. Implementation of this process will provide valuable experience that can be shared with other ASEAN countries (UN-REDD 2010b).

One of the key issues is unclear rights and legal tenure agreements for forestland, which could prevent local communities from receiving benefits from REDD+. Unless communities have secure tenure to forests, they are unlikely to have a secure share in potential benefits from REDD+ (Sikor and Nguyen 2010). Although communities can be allocated forestland under the 2004 Forest Law, they are not recognized as valid legal bodies under the Vietnam Civil Code, and can therefore not enter into contractual agreements regarding forest protection, resource use, and benefit payments.

Another important issue is weak forest law enforcement in Vietnam. Illegal activities such as logging and encroachment may counteract efforts to reduce emissions from deforestation (UN-REDD 2010a). Furthermore the lack of capacity of communities and Government agencies to sustainably plan, manage, and monitor forest management that has hindered effective implementation of CFM, will also likely present challenges for implementation of REDD+ projects, particularly given its complicated and technical nature.

National Climate Change Mitigation Activities

In December 2008 Vietnam created the NTP on Climate Change to identify and assess the likely impacts of climate change on different sectors and locations, mainstream climate change considerations into sector development plans, and develop strategies, action plans, and institutional capacity to respond effectively to climate change.

In recent years Vietnam has embarked on a number of large-scale afforestation programs, such as Programme 661 which uses commercial species to increase forest cover and supply raw materials

for the expanding furniture production industry. As a result, Vietnam has seen an increase in forest cover in recent years, from 9.1 mha in 1990 to 13.2 mha in 2010 – an increase of around 50% (FAO 2010). However, it is unclear whether this increase in forest cover would have produced any carbon mitigation impacts, because the amount of natural forest has declined in relation to the amount of plantations. Natural forests declined from 92% of the total forest area in 1991 to 75% in 2010, while plantation forests have increased from 8% to 21% over the same period (FAO 2010). Plantation forests sequester significantly less carbon than natural forests – 250 tonnes of carbon/ha in natural forests versus 50 tonnes of carbon/ha in fast growing plantations – so if natural forests are replaced with plantation forests, sequestration rates may increase, but carbon stocks will decrease (FAO 2009b).

National Climate Change Adaptation Activities

In 2008, MARD created an Action Plan Framework for Adaptation to Climate Change, with the aim of enhancing capabilities for adaptation and mitigation, minimizing the adverse impacts of climate change, and ensuring sustainable development in agriculture and rural development in the context of climate change. This process is being carried out independent of the UNDP NAPA process, which has not been undertaken in Vietnam. The Action Plan includes a range of activities, including developing systems for integrating climate change into agricultural and rural development programs; defining implementation responsibilities of different agencies; strengthening human resource; improving research on potential impacts of climate change; strengthening regional and international cooperation; raising awareness; and importantly, ensuring that rural communities receive equal benefits when implementing climate change adaptation and mitigation policies.

A number of international NGOs, such as CARE International and Oxfam UK, are supporting local communities to improve their resilience to the impacts of climate change.

Other climate change-related projects and programs

Vietnam currently has the only CDM project on afforestation and reforestation in ASEAN, funded by JICA and Honda Vietnam. The project aims to reforest 320 ha in two communes in Hoa Binh Province over a three-year period (UN-REDD 2010a).

In September 2010, the Government issued a decree to scale PES up to the national level starting in January 2011 (Decree 99/2010/ ND-CP dated 24 September 2010). Decree 99 creates the statutory legal framework for PES as well as an enabling environment to implement and evaluate pilot PES projects. It is the first initiative of its kind in the ASEAN region. The PES Decree stipulates the types of environmental services where users must pay the suppliers for that service, including soil protection, erosion control, water supply, biodiversity conservation, forest carbon sequestration and retention, and reduction of emissions through prevention of forest loss and degradation. It specifies the environmental service users who should pay for environmental services, such as hydropower facilities, water supply facilities, industrial facilities, and tourism operators – as well as those who are entitled to receive payments from such services. It sets out principles and methods of payments, and provides guidelines on the levels of payments, use of revenues, and benefit-sharing arrangements through the Forest Protection and Development Fund. It also stipulates the rights and obligations of

users and suppliers of forest environmental services and the responsibilities of State management agencies across various levels and sectors in implementing payments.

A number of PES pilot projects are being carried out. These include a project under the Asia Regional Biodiversity Conservation Program, supported by Winrock International, which is developing a PES-bundling strategy in Lam Dong Province, and its sister pilot in Son La Province supported by GIZ. These pilot projects are helping to improve the livelihoods of poor and vulnerable communities in the area, as well as strengthening their land and resource tenure (Winrock 2010). RUPES Vietnam is also conducting a pilot project in Bac Kan to test opportunities for PES in Integrated Watershed Management, A/R-CDM, CDM (energy), and conservation funds for soil and water resource management (RUPES Vietnam 2010).

Institutions Involved in Climate Change

The Directorate of Forestry is the lead agency for preparation of Vietnam's REDD program.
MoNRE is in charge of land-use certification and is the agency in charge of climate change policy and planning.

A Climate Change Working Group consisting of national and international NGOs was established in 2007 to coordinate advice to Government institutions on climate change matters, including REDD+. In 2008 a similar body was set up consisting solely of Vietnamese NGOs. Both these institutions are regularly involved in meetings of the national REDD working group, advising the UN-REDD Vietnam Country Programme.

Conclusion

There is significant potential for social forestry to contribute to climate change mitigation and adaptation in Vietnam. Indeed, the country has been prompt to engage with forest-based mitigation schemes such as REDD+. Much of Vietnam's forest area is already managed by local communities. These degraded forests under community management offer considerable scope for reversing forest degradation and enhancing forest carbon stocks. The legal framework, procedures, and institutions necessary for community forestry have already been developed and put in place, and can be strengthened and adapted to accommodate REDD+. REDD+ may also help to contribute to other development goals such as rural poverty alleviation and forest protection (Sikor and Nguyen 2010).
However, progress on certain key points will be necessary for effective REDD+ implementation. Allocation of forest rights certificates to communities and households has not always been effective, leading to confusion, insecurity, and increased deforestation and degradation. Without secure tenure rights, local people may not be able to receive secure benefits from mitigation schemes such as REDD+.

Community forest managers have limited understanding about their roles and responsibilities for SFM. The allocation of land-use certificates has largely been seen as the end point of the process. Limited support is provided to develop the capacity of communities and help them manage their

forest resources, or prepare, implement, and monitor SFM plans. Capacity for SFM at the community level is therefore limited, and CFM has often led to further depletion and degradation of forest resources. Furthermore, the resources and capacity of Government authorities at provincial, district, and commune levels need to be strengthened.

These issues are intensified by a growing population that puts greater pressure on forest resources for livelihoods, food, and timber supplies, leading to greater encroachment into forest areas. In addition, demand for timber to supply Vietnam's thriving furniture industry, now the country's third largest export, is increasing rapidly. The Government is keen to produce more of its own timber through large-scale afforestation programs. In light of this, the challenge for REDD+ will be to offer adequate financial incentives.

Looking Ahead in the Region

Despite the many challenges, considerable opportunities exist for social forestry to contribute to climate change mitigation and adaptation efforts in the ASEAN region. Over the past 20 years social forestry has been gaining recognition as an effective strategy for SFM. Most ASEAN countries have taken steps to establish the necessary frameworks for social forestry.

The development and implementation of social forestry policies, legislation, governance structures, and institutional capacity have followed a different path in each country. The distinct variations will have a bearing on the extent to which each country will be able to implement social forestry for climate change mitigation and adaptation.

Many ASEAN countries have started to address issues of climate change by developing national- and local-level mitigation and adaptation strategies. Within the forestry sector, REDD+ currently presents the most promising opportunity for action on climate change mitigation. It may also help to contribute to forest protection, improved livelihoods for forest-dependent people, and sustained economic growth.

Social forestry and REDD+ share similar goals. Both aim to promote forest protection and the engagement of local people in SFM. Social forestry is therefore likely to provide a useful platform for the scaling up of REDD+ in the ASEAN region, particularly in terms of securing the participation of local people.

Annexes

Annex 1: Brunei Darussalam

The State of Brunei Darussalam is a small country whose economy is heavily geared towards oil. Sixty-seven percent of the country is still covered with forest, which amounts to 380,000 ha of forestland. Most of Brunei's population lives in urban areas and the number of forest-dependent people is very low. As a result, social forestry programs within the country take the form of recreation activities and for awareness-raising regarding climate change and forest protection.

The main body for forest management is the Forestry Department, which is under the Ministry of Industry and Primary Resources. The Forest Act, revised in 2003, is the main item of legislation relating to forests.

Brunei's Ninth National Development Plan emphasizes forest conservation. Previous National Development Plans have funded efforts to restore degraded forestlands for aesthetic reasons. Brunei has banned the export of timber from its forests, and encourages the use of imported timber, rather than domestic timber. This may be placing increased pressure on forest resources in other countries. Forest fires are a major threat to the tropical forests that cover 55% of the country and are also a source of atmospheric pollution. Twenty-six percent of Brunei's forests are protected in recognition of the environmental services they provide.

Key Statistics: The State of Brunei Darussalam	
Total population	399,687
Rural population	98,882 25% of total population
Total land area (excluding inland waterbodies)	567,000 ha
Total forested area	380,000 ha 67% of total land area
Production forest	219,000 ha 58% of total forest area
Protected forest – soil and water	19,000 ha 5% of total forest area
Protected forest – biodiversity conservation	100,000 ha 26% of total forest area
Forest under community management	0
Carbon stocks	In above- and belowground living biomass: 72 million tonnes In litter: data not available In soil: 20 million tonnes
Rates of Deforestation	Average -2,000 ha per year from 2005-2010 Average - 0.47% per year from 2005-2010
Social forestry programs/ activities	N/A
Mitigation programs/ activities	N/A
Adaptation programs/ activities	N/A

Climate change has not yet been integrated into forest policy. However, the country's Forest Management Strategy details various projects, activities, and initiatives that contribute to climate change mitigation and adaptation. Brunei ratified the Kyoto Protocol in August 2009, a few months before COP15. As a Non-Annex I country, Brunei is not committed to reducing its GHG emissions.

Annex 2: Singapore

The Republic of Singapore is a highly urbanized and industrialized city-state, and a regional center for trade and commerce. The forest that once covered the island was rapidly cleared from the early 1800s. A system of forest reserves was implemented in 1884 to safeguard the remaining forested areas from uncontrolled exploitation. These forest reserves have been gradually released over the decades for agricultural and urban land uses.

The present 2,300 ha of remaining forest are owned by the State. These are limited to four areas – the Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Sungei Buloh Wetland Reserve, and the Labrador Nature Reserve. The National Parks Board controls, administers, and manages Singapore's national parks, nature reserves, and public parks. All forests in Singapore are now protected for the purposes of biodiversity conservation and recreation. No exploitation of timber and NTFPs is permitted in forest areas. There are no programs for social forestry in Singapore.

Given that Singapore is a low-lying and densely populated island, climate change is a major issue and cuts across various policy areas. Its small size limits the options for increasing forest cover to increase carbon sequestration. Therefore the key strategy to mitigate GHG emissions in Singapore is to increase energy efficiency in power generation, industries, transport, building construction, and households.

The National Climate Change Strategy of 2008 outlines Singapore's response to climate change, highlighting actions to be taken on mitigation, adaptation, building competencies, and participating in international efforts.

Key Statistics: The Republic of Singapore	
Total population	5,000,000
Rural population	0
Total land area (excluding inland waterbodies)	68,900 ha
Total forested area	2,300 ha 3% of total land area
Protected forest	2,300 ha 100% of total forest area
Protection forest - soil and water	0%
Protection forest -biodiversity conservation	2,300 ha 100%
Forest under community management	0
Carbon stocks	Data not available
Social forestry programs/activities	None
Mitigation programs/ activities	National Climate Change Strategy (2008)
Adaptation programs/ activities	National Climate Change Strategy (2008)

The Inter-Ministerial Committee on Climate Change (IMCCC) was set up in 2007 to formulate Singapore's positions and strategy for international negotiations.

The National Climate Change Secretariat (NCCS) is responsible for coordinating of Singapore's climate change-related policies; building and sustaining Singapore's institutional knowledge of climate change; preparing for climate change challenges; and ensuring compliance with international agreements. In 2010, a strengthened NCCS moved to the Prime Minister's Office to reflect the cross-sectoral nature of policy matters relating to climate change, and also, to better support the IMCCC.

Annex 3: Data Table

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Phillipines	Singapore	Thailand	Vietnam	TOTAL
Total Population	399.687	14.805.358	229.964.723	6.320.429	27.467.837	50.019.775	91.983.102	4.987.600	67.764.033	87.279.754	**580.992.298**
Rural Population	98.882	11.521.529	109.049.271	4.295.363	7.888.762	33.393.201	31.586.997	0	44.954.659	62.562.128	**305.350.792**
% Rural Population	25%	78%	47%	68%	29%	67%	34%	0%	66%	72%	**52,6%**
Total Land Area (ha, excluding area under inland water bodies)	567.000	17.652.000	181.157.000	23.080.000	32.855.000	65.755.000	29.817.000	68.900	51.089.000	31.007.000	**433.047.900**
Total Forest Area (ha)	380.000	10.094.000	94.432.000	15.751.000	20.456.000	31.773.000	7.665.000	2.300	18.972.000	13.797.000	**213.322.300**
% of TotalLand Area	67,0%	57,2%	52,1%	68,2%	62,3%	48,3%	25,7%	3,3%	37,1%	44,5%	**49,3%**
Production Forest (ha)	219.000	3.374.000	49.680.000	3.596.000	12.739.000	19.633.000	5.861.000	0	2.653.000	6.524.000	**104.279.000**
% of Total Forest	57,6%	33,4%	52,6%	22,8%	62,3%	61,8%	76,5%	0,0%	14,0%	47,3%	**49%**
Protected Forest (Soil & Water, ha)	19.000	551.000	22.667.000	9.074.000	2.694.000	1.352.000	613.000	0	1.332.000	5.131.000	**43.433.000**
% of Total Forest	5%	5%	24%	58%	13,2%	4,3%	8,0%	0,0%	7,0%	37,2%	**20%**
Protected Forest (Biodiversity Conservation, ha)	81.000	3.985.000	15.144.000	3.043.000	1.946.000	2.081.000	1.191.000	2300	8.853.000	2.142.000	**38.468.300**
% of Total Forest	21%	39%	16%	19%	9,5%	6,5%	15,5%	100,0%	46,7%	15,5%	**18%**
Community Managed Forest (ha)	N/A	113,544 *	3.300	8,210,803 #	N/A	41.000	2.985.000	0	194,000 ^	3,300,000 ~	**3.029.300**
% of Total Forest	N/A	1%	0%	52%	N/A	0,1%	39%	0	1%	24,0%	**1%**
Carbon Stocks (mmt)											
In Above-Ground and Below-Ground Living Biomass	71,6	464	13.017	1.074	3.212	1.653	663	N/A	881	992	**22.028**
In Litter	N/A	N/A	N/A	N/A	43	67	16	N/A	N/A	72	**198**
In Soil	19,9	384	N/A	N/A	N/A	N/A	498	N/A	N/A	651	**1.553**
Deforestation (Natural Forest Cover)											
Annual Change Rate (ha)	-2000	-144000	-485.000	-91.000	-128.000	-339.000	52.000	0	-91.000	61.000	**- 1.167.000**
% Annual Change Rate	-0,47%	-1,26%	0,51%	-0,60%	-0,64%	-0,99%	0,77%	0	-0,57%	-0,63%	

Sources:
Population data from World bank Indicators
Forest Data from FAO Global Forest Resources Assessments 2010 - Country Reports
Deforestation figures from http://rainforests.mongabay.com/deforestation/ Based on data from FAO Global Forest Resources Assessment (2005 & 2010) and the State of the World's Forests (2009, 2007, 2005, 2003, 2001)

* Blomley et al, 2010
\# Lao PDR Forest Sector Strategy to 2020 (MAF 2005)
^ Wichawutipong, 2005
~ Nguyen et al, 2010

Annex 4: List of Indonesia's REDD+ Demonstration Activities (DAs)

Note: The information listed below comes from the Center for Standardization and Environment, Directorate-General of Forestry Planning, Ministry of Forestry of the Republic of Indonesia (MoFRI). It summarizes results from a workshop jointly organized with the UN-REDD Indonesia Programme on Inventory of Indonesia's REDD+ Demonstration Activities. The workshop was held in Jakarta on 21 December 2010.

1. Korea-Indonesia Joint Project for Adaptation and Mitigation of Climate Change in Forestry (KIPCCF), in Central Lombok (North Batukliang Sub-District), West Nusa Tenggara Province, by KOICA and FORDA, MoFRI.
2. Kalimantan Forests and Climate Partnership (KFCP), in Kapuas District, Central Kalimantan, by the governments of Indonesia and Australia.
3. Central Sulawesi REDD DA, implemented by PMU UN-REDD, Directorate-General of Forestry Planning and Forestry Agency in Central Sulawesi.
4. Danau Siawan Peat Swamp Forest REDD+ DA, in Danau Siawan, Kapuas Hulu District, West Kalimantan, by PT Wana Hijau Nusantara supported by Fauna & Flora International (FFI)/ Macquarie.
5. Sungai Putri Peat Swamp Forest REDD+ DA, located approximately 30 km north of Ketapang, Ketapang District, West Kalimantan, by PT Wana Hijau Nusantara supported by FFI/Macquarie.
6. Reducing Emission from Deforestation caused by the Oil Palm Sector in West Kalimantan (Ketapang District), by FFI and oil palm companies (PT. Kayong Agro Lestari and PT. Cipta Usaha Sejati).
7. Community Carbon Pool (Ketapang and Kapuas Hulu, West Kalimantan) by the FFI Indonesia Program.
8. Hutan Desa Community Carbon Pool (Merangin District, Jambi Province, Sumatera), by the FFI Indonesia Program.
9. Tropical Forest Conservation for Reducing Emissions from Deforestation and Forest Degradation and Enhancing Carbon Stocks in Meru Betiri National Park, Indonesia, by the Center for Research and Development on Forestry Policy and Climate Change – FORDA, MoFRI, Meru Betiri National Park and LATIN.
10. Berau Forest Carbon Partnership Program, Berau District, East Kalimantan, by the Government of Berau District and the Multistakeholder Forum, facilitated by The Nature Conservancy (TNC). a pilot forest carbon partnership that may be used as a model for future REDD+ pilot development.
11. Forest Programme Support for the Ministry of Forestry – FC Module, in Kapuas Hulu District – West Kalimantan Province, Malinau and Berau Districts – East Kalimantan Province, by district governments, IUPHHK license holders, Bureau of Forestry Planning, MoFRI.
12. Berbak Carbon Initiative Project (REDD Readiness Project in Berbak Ecosystem Area – Berbak National Park, East Tanjung Jabung and Muaro Jambi Districts, Jambi Province), by the Zoological Society of London – Indonesia Programme and Berbak National Park, Jambi Province.

13. PT. Restorasi Habitat Orangutan Indonesia, in the former area of PT. Mugitriman, East Kutai and Kutai Kartanegara Districts, East Kalimantan Province, by PT. Restorasi Habitat Orangutan Indonesia.
14. Merang REDD Pilot Project (MRPP), in the production forest area of Rawa Gambut Merang Kepayang, Bayung Lencir Sub-District, Musi Banyuasin District, South Sumatera Province, by the Directorate of Production Forest Utilization Planning Development – Directorate-General of Forestry Business Development, Forclime-GIZ; Forestry Agency of South Sumatera Province; Forestry Agency of Musi Banyuasin, and KPHP Lalan.
15. REDD+ in Jayapura District, Papua Province (Unurum Guay Sub-District, Jayapura District, Papua Province), by WWF Indonesia.
16. Spatial Planning Transformation in West Kutai District in Reducing Forest Carbon Emission (West Kutai District, East Kalimantan), by WWF Indonesia.
17. Sebangau Restoration Project (Sebangau National Park) by WWF Indonesia and Sebangau National Park.
18. REDD+ in Tesso Nilo Forest Compound (Pelalawan District, Kuantan Singingi, Riau Province) by WWF Indonesia.
19. Katingan Peat Restoration and Conservation Project (Katingan and East Kotawaringin Districts), by PT. Rimba Makmur Utama (RMU).
20. Pre-Feasibility Study on Investment Schemes for Japanese Private Sector in an REDD+ Project in Indonesia (Pelalawan District – Riau Province, and Katingan District – Central Kalimantan Province), by FORDA, Directorate-General of Forestry Planning, and Directorate-General of Forestry Business Development.

References

References

ASEAN Secretariat. 2009. *Fourth ASEAN State of the Environment Report 2009: Executive Summary.* ASEAN Secretariat, Jakarta. October 2009.

ASEAN Social Forestry Network (ASFN). 2008. *Malaysia Report to Second Meeting of the ASFN,* Bangkok, 27-29 August 2008.

Bian, B. (No date). *Native Customary Rights (NCR) over Land in Sarawak, Malaysia.*

Blaser, J. 2010. *REDD+ Initiatives in Indonesia: A rough and incomplete overview - December 2010.*

Blomley, T., Tola, P., Kosal, M., Dyna, E. & Dubois, M. 2010. *Review of Community Forestry and Community Fisheries in Cambodia.* Prepared for the Natural Resource Management and Livelihoods Programme.

BlueGreen Alliance. 2010. *Illegal Logging in Indonesia: The Environmental, Economic and Social Costs.*

Bradley, A. 2009. *Communities and Carbon: Establishing a Community Forestry-REDD Project in Cambodia.* Pact Cambodia.

Brown, E. & Jacobson, M. 2005. *Cruel Oil.* The Centre for Science in the Public Interest (CSPI).

Chaudhury, M. 2008. *Outlook Study; Assessing the Protection of Forest-Based Environmental Services in the Greater Mekong Sub-Region.*

Cruz, R. & Pulhin, J. 2006. *Review of Multisectoral Forest Protection Committees in the Philippines.* VERIFOR Country Case Study 7.

Dahal, G.R. & Capistrano, D. 2006. *Forest Governance and Institutional Structure: An Ignored Dimension of Community-Based Forest Management in the Philippines.* Centre for International Forest Research (CIFOR) Forests and Governance Programme, Indonesia.

DoF, Lao PDR. 2001. *Village Forestry Handbook*. Forest Management & Conservation Program, Village Forestry Sustaining Phase (2000-2001). Ministry of Agriculture & Forestry, Savannakhet and Khammouane, Lao PDR. March 2001.

EIA/Telepak. 2008. *Borderlines: Vietnam's Booming Furniture Industry and Timber Smuggling in the Mekong Region.*

Food and Agriculture Organization of the United Nations (FAO). 2010. *Global Forest Resources Assessment Country Reports* (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam).

FAO. 2009a. *Thailand Forestry Outlook Study.* FAO Asia-Pacific Forestry Sector Outlook Study II. Working Paper Series, No. APFSOS II/WP/2009/22, Bangkok.

FAO. 2009b. *Vietnam Forestry Outlook Study.* FAO Asia-Pacific Forestry Sector Outlook Study II. Working Paper Series, No. APFSOS II/WP/2009/09, Bangkok.

FAO. 2007. *Brief on National Forest Inventory, Cambodia*. Forest Resources Development Service, Rome**,** MAR-SFM Working Paper 15, Rome.

FAO. 1997. *Country Report - Union of Myanmar*. FAO Asia-Pacific Forestry Sector Outlook Study, Working Paper Series No: 8, Forest Department, Ministry of Forestry, Myanmar.

FAO. 1992. *Community Forestry: Ten Years in Review*. Rome. http://www.fao.org/docrep/u5610e/u5610e04.htm (accessed on 10th November 2010).

Forestry Administration, Cambodia. 2010. *Cambodia Forestry Outlook Study,* FAO Asia-Pacific Forestry Sector Outlook Study II, Working Paper Series, No. APFSOS II/WP/2010/32, Phnom Penh.

Forest Watch Indonesia and Global Forest Watch (**FWI/GFW).** 2002. *The State of the Forest: Indonesia*. Forest Watch Indonesia and Global Forest Watch.

Fujita, Y., Vongvisouk, T., Chantavong, H., & Chanthaleunnavong, S. 2005. Dong Phou Xoy and Dong Sithouane Production Forests: paving the way for village forestry. In *In Search of Excellence: Exemplary Forest Management in Asia and the Pacific.* Edited by Patrick B. Durst, Chris Brown, Henrylito D. Tacio & Miyuki Ishikawa. FAO and RECOFTC. 2005.

Gilmour, D. & Doan Diem. 2008. *Community Forest Management Pilot Programme: Mid-term Review of Project*, Department of Forestry, Vietnam.

Heimo, C.R. (No date). *Forest and Forestland Allocation in Vietnam: Some Open Questions*. SNV-Vietnam.

Heov, K.S *et al.* 2006.*The Value of Forest Resources to Rural Livelihoods in Cambodia*. Cambodia Development Resource Institute, Policy Brief, March 2006, Issue 2.

Hindra, B. 2005 *Community Forestry Status Report. Indonesia Community Forestry.*

Htun. 2009. *Asia-Pacific FAO Forestry Sector Outlook Study I*. Working Paper Series, No. APFSOS II/WP/2009/07, Myanmar Forestry Outlook Study.

Kingkeo, S. 2010. *Forest Tenure and Regulatory Reforms*. Presented at the Conference on Forest Tenure and Regulatory Reforms, Beijing, China. 25 September 2010. http://www.rightsandresources.org/presentations.php

Koh, L.P. & Butler, R. 2009. *Can REDD Make Natural Forests Competitive with Oil Palm?* ITTO 19/1.

Lasco., R.D., Evangelista, R.S., Pulhin, F.B. & Lopez, R. 2010. *The Potential of Community-Based Forest Management to Mitigate Climate Change in the Philippines*.

Lewis, S. *et al.* 2009. Increasing carbon storage in intact African tropical forests. *Nature,* 19 February 2009.

Luttrel, C. & Brown, D. 2006. *The Experience of Independent Forest Monitoring in Cambodia*. VERIFOR Country Case Study 4.

Malaysian Timber Council (MTC). *Fact Sheet*. 2009.

Ministry of Agriculture and Forestry (MAF), Lao PDR. 2005. *Forestry Strategy to the Year 2020 of Lao PDR*. Vientiane, July 2005.

Ministry of Agriculture, Forestry and Fisheries (MAFF) Cambodia. 2010 *Cambodia's Statement on its National Forest Programme.*

Ministry of Agriculture and Rural Development (MARD), Vietnam. 2008. *Action Plan Framework for Adaptation & Mitigation of Climate Change in the Agriculture and Rural Development Sector 2008-2020.* (Enclosed with Decision No.Q-BNN-KHCN dated 5 September 2008 by the Minister of Agriculture and Rural Development) MARD Hanoi, Vietnam. http://www.presscenter.org.vn/en//images/QD-BNN-KHCN_EN.pdf.

Ministry of Finance, Indonesia. 2009. *Ministry of Finance Green Paper: Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia.* Ministry of Finance and Australia Indonesia Partnership, Jakarta.

Ministry of Natural Resources and Environment (MNRE), Thailand. 2009. *FCPF Readiness Plan Idea Note (R-PIN).* Initial Submission 15 Dec 2008. Revised Submission 16 Feb 2009.

Nguyen, Q.T., Sikor, T., Enters, T. & Vickers, B. 2010. *People, Forests and Climate Change Mitigation. Vietnam: Why REDD+ Needs Local People*. RECOFTC, Bangkok.

Nguyen, Q.T., Nguyen, V.C. & Vu T.H. 2008a. *Statutory and Customary Forest Rights and their Governance Implications: The Case of Viet Nam.* July 2008, IUCN, Hanoi, Viet Nam.

Nguyen, Q.T., Nguyen B.N. & Tran N.T. 2008b. *Whose Forest Tenure Reform Is It? Lessons from Case Studies in Vietnam.* RECOFTC Policy Brief, April 2008.

Oberndorf, R. 2010. *REDD+ in the Cambodian Context: an Overview of the Policy, Legal and Governance Frameworks Impacting Implementation.*

Poffenberger, M. 2009. Cambodia's forests and climate change: Mitigating drivers of deforestation. *Natural Resources Forum,* 33 (2009) 285-296.

Pulhin, J.M. 2010. *Emerging REDD+ Architecture-Implications for the Philippines' Community-Based Forest Management*. Presented at the Asia Dialogue on Community Forests and Property Rights in the Context of Climate Change in Kathmandu.

RECOFTC & The Learning Institute. 2010. *Capacity Building Needs Assessment; Country Profile of Community Forestry and Community Protected Area Management in Cambodia* (Working Draft). 25 August 2010.

Siscawati, M., & Zakaria, R.Y. 2010. *Capacity Building Needs Assessment for Community Forestry in Indonesia.* RECOFTC, Bogor.

Sikor, T., & Nguyen Q.T. REDD+: A chance for rights-based conservation in Vietnam. *Policy Matters,* 17, 2010.

Stern, N. 2006. *Stern Review: The Economics of Climate Change*. Cambridge University Press, Cambridge, UK.

Stibig, H-J, Beuchle, R., Janvier, P. 2000. Southeast Asia Mosaic of SPOT VGT at 1:5,500,000. European Commission Joint Research Centre Global Environment Monitoring Unit.

Thaung, T.L. 2003. Myanmar: A Personal View: Community Forestry in Myanmar. Community Forestry E-News No.2003.16. October 2003.

Tong, P.S. 2009. *FAO Asia-Pacific Forestry Sector Outlook Study II*. Working Paper Series No. APFSOS II/WP/2009/17, Lao People's Democratic Republic, Forestry Outlook Study.

UN-REDD. 2010a. *Design of a REDD Compliant Benefit Distribution System for Viet Nam*. UN-REDD Programme, January, 2010.

UN-REDD. 2010b. *Applying Free Prior and Informed Consent in Viet Nam*. UN-REDD Programme, April, 2010.

UN OHCHR. 2007. *Economic Land Concessions in Cambodia: A Human Rights Perspective.* Cambodia Office of the High Commissioner for Human Rights (OHCHR).

Vickers, B. *et al.* 2010. *Forests and Climate Change in the Asia-Pacific Region*. Forests and Climate Change Working Paper 7, FAO, Rome 2010.

Vongsiharath, V. (No date). *Forest Cover and Land-use Changes in Lao PDR According to the National Forest Reconnaissance Survey.* Department of Land Planning and Development, National Land Management Authority, Lao PDR.

Water Resources and Environment Administration (WREA), Lao PDR. 2009. *National Adaptation Programme of Action to Climate Change,* WREA, Lao PDR. April 2009.

Westerholm, L. 2010. *Malaysia Country Brief*. Focali.

Wichawutipong, J. 2005. *Thailand Community Forestry 2005*. Royal Forest Department, Thailand.

Wingqvist, G. O. 2009. *Cambodia Environmental and Climate Change Policy Brief.* Environmental Economics Unit, University of Gothenburg and Sida.

Wode, B. & Huy, B. 2009. *Study on the State of the Art of Community Forestry in Vietnam*.

World Bank. 2008. *The World Bank in Laos.* Issue No. 6, March to April 2008.

Yong, C. 2006. *Forest Governance in Malaysia: An NGO Perspective*. Produced for JOANGOHutan by FERN, September 2006.

Yusuf, A. & Francisco, H. 2009. *Climate Change, Vulnerability Mapping for Southeast Asia.* Economy and Environment Program for Southeast Asia, Singapore. January 2009.

Websites consulted:

cait.wri.org
forestry.denr.gov.ph/statglance2010.htm
www.aseansec.org
www.asiaforests.org
www.asiaforestnetwork.org/cfm.htm
www.conservation.org
www.data.worldbank.org/indicator
www.forestcarbonpartnership.org/
www.illegal-logging.info
www.ipcc.ch
www.pactworld.org/cs/redd_glossary
www.rainforests.mongabay.com
www.recoftc.org
www.reddpluspartnership.org/en
www.thaiclimate.org/Eng/index.cfm
www.unfccc.int
www.un-redd.org
www.verifor.org/background/case-studies
www.worldbank.org

RECOFTC – The Center for People and Forests aims to see more communities actively managing more forests in the Asia-Pacific region to ensure optimal social, economic, and environmental benefits. Since its founding in 1987, RECOFTC has trained more than 10,000 people from over 20 countries in devolved forest management: from national policy makers, researchers, and practitioners right through to local forest users. Training services and learning events are complemented by on-the-ground projects, critical issue analysis, and strategic communications.

The **ASEAN Social Forestry Network (ASFN)** is the first government-driven social forestry network in Southeast Asia. Established by ASEAN Senior Officials on Forestry (ASOF) in August 2005, ASFN links government forestry policy makers directly with other network members from civil society, research organizations, academia, private sectors, and related fields – all of whom share a vision of promoting social forestry policy and practices in ASEAN Member Countries.

The **Swiss Agency for Development and Cooperation (SDC)** is Switzerland's international cooperation agency within the Federal Department of Foreign Affairs. Operating with other federal offices, SDC is responsible for the overall coordination of development activities and cooperation with Eastern Europe, as well as for the humanitarian aid delivered by the Swiss Confederation.

Printed on 50% recycled paper