



THE CENTER FOR
PEOPLE AND FORESTS

Community forestry adaptation roadmap to 2020 for Thailand



Table of contents

Acknowledgements	2
Introduction	3
Key messages and recommendations	4
Acronyms	5
Overview and key statistics	7
Community forestry in Thailand	8
Expected climate change impacts in Thailand	9
Flooding	12
Drought	12
Community forestry and climate change adaptation	11
Forest management	11
Mangroves	11
Case Study – Pred Nai Mangrove Conservation and Development Group	12
Policies and planning	13
Key institutions	13
Key policies	13
Thailand Climate Change Master Plan (2013-2050)	13
Legal reform	18
Project development	22
Public funding and private investment	28
Public funding	28
International support	28
Private investment	28
Capacity development	31
Research	31
Training and networking	31
Thailand's community forest and adaptation roadmap to 2020	34

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Introduction

During the course of the twenty-first century, Asia and the Pacific's forest-dependent communities will bear the brunt of climate change impacts – specifically, the 2.2 billion people living in the region's rural areas, and the 450 million people in the Asia-Pacific region who rely on forest resources to some degree. Forestry and climate change policies, laws, projects, financing and capacity building efforts must address these people's interests through climate change adaptation.

Community forestry supports local level climate change adaptation by enhancing resilience in multiple ways: supporting livelihoods and income, increasing food security, leveraging social capital and knowledge, reducing disaster risks and regulating microclimates. However, adaptation planning has, by and large, not included community forestry as a viable climate change adaptation tool. To address this, RECOFTC – The Center for People and Forests has developed a set of roadmaps to help guide the meaningful inclusion of community forestry in climate change adaptation planning through the year 2020.

To develop the roadmaps, RECOFTC – The Center for People and Forests conducted a desk-based literature review on the link between community forestry and climate change adaptation in the region, and in the selected countries. Based on the review, a ten-question interview template was drafted to gather primary data from experts, defined as practitioners, policy-makers and researchers with experience in community forestry and/or adaptation in the included countries. The information provided by these interviews informed the analysis and recommendation of these reports.

Key messages and recommendations

In Thailand there are a relatively high number of community forestry based adaptation projects in place, even though there is only a weak legal framework for community forestry. This suggests that the absence of strong laws does not preclude advancing community forestry-based adaptation. Regardless of legal progress, it is vital to replicate and scale up existing project and capacity building approaches and mainstream them into national adaptation plans. In the long term, a strong legal framework for community forestry in Thailand is critical to ensuring long-term resilience for forest-dependent communities. The most immediate and pressing actions needed are the following:

- **Policies and planning** – Guidelines on community forest-based adaptation for existing community forests should be developed and distributed widely amongst government agencies and forest user groups. The Royal Forest Department (RFD) and Department of National Parks should be encouraged to work together with Tambon Administration Organizations (TAOs) and community forestry groups to undertake vulnerability assessments and create forest management plans that include climate change adaptation strategies.
- **Legal reform** – Formalizing community forestry in law, through ultimate passage of the Community Forestry Bill, will provide the necessary security local people need for long-term management of forest areas in light of climate change. Through a consultative process involving local people, academics and other stakeholders, the revision process for the bill must address issues of climate change adaptation, food security and forest-based enterprises. In the mean time, RFD and the Department of National Parks should scale up participatory land-use mapping to clarify boundaries between community forests and protected areas.
- **Project development** – The Ministry of Natural Resources and Environment (MONRE) should review learning from community forestry adaptation projects with a view to replicating and scaling up these approaches at a national level (in collaboration with other relevant agencies). An increased focus should be given to developing demonstration sites for community forestry-based adaptation in northern Thailand in order to identify successful project models for upland landscapes.
- **Public funding and private investment** – Establish community adaptation funds in community forestry groups and TAOs both for emergency needs such as forest fires, flooding and landslides and for long term adaptation planning against slow onset events (e.g. changing seasonal rainfall patterns).
- **Capacity development** – Focus academic and research climate change institution's focus towards local level adaptation concerns and related policy development, building on the ongoing climate risk and hotspot assessment by MONRE. Develop grassroots capacity building efforts on adaptation as part of the community forestry development process. The use of a "local resource person" trained in climate adaptation in community forest groups (as used by FECOFUN in Nepal) would facilitate community forest vulnerability assessments and adaptation planning at the local level.

Acronyms

CSR	Corporate Social Responsibility
GDP	Gross Domestic Product
Ha	hectares
MoNRE	Ministry of Natural Resources and Environment
NGOs	Non-governmental Organizations
NTFPs	Non-timber of Forest Products
ONEP	Office of Natural Resources and Environmental Policy and Planning
RECOFTC	Regional Community Forestry Training Center for Asia and the Pacific (also known as The Center for People and Forests)
RFD	Royal Forest Department
SDF	Sustainable Development Foundation
TAO	Tambon Administrative Organizations



Overview and key statistics

Key statistics	
Total population	69,785,001 ¹
Total land area (ha)	51,089,000
Total forested area (ha)	18,972,000
Forest under community management (ha)	194,000 ²
Forest-dependent population	20,000,000 – 25,000,000 ³
Rate of deforestation (ha/year)	+15,000 ⁴ (2005 -2010 average); 21,000 (2000-2005 average); 55,000 (1990-2000 average) ⁵
Global Adaptation Institute (GAIN) Index⁶	<p><i>Overall Ranking: 61 out of 179 countries (1 is best)</i> <i>Overall Score: 64.8 (100 is best)</i> <i>Better than expected given GDP/capita⁷</i></p> <p><i>Vulnerability: 0.295 (0 is best)</i> <i>Less vulnerable than expected given GDP/capita</i></p> <p><i>Readiness: 0.591 (1 is best)</i> <i>More ready than expected given GDP/capita</i></p>
Climate Risk Index⁸	Thailand is the 13th country in the world most impacted by extreme weather events between 1991 and 2010.
Major expected climate change impacts	<ul style="list-style-type: none"> • Sea-level rise threatens to submerge Bangkok within 20 years and devastate coastal tourism.⁹ • Higher temperatures and irregular rainfall patterns (higher intensity rainfall and prolonged periods of drought) will damage rice and other crops that are central to the economy. Wet season crops may increase in some areas and decrease in others. • Increased frequency and severity of flooding. • Severe coastal erosion has been reported in 23 provinces.¹⁰
Level of national adaptation planning and preparedness (H/M/L)	High
Reference to forestry in national adaptation planning (H/M/L)	Low
Adaptation practices of relevance to community forestry	Livelihood enhancement and diversification; mangrove restoration to mitigate coastal flooding; landslide and erosion prevention; provision of food and water during drought or crop failure; use of agroforestry (such as 4-layer canopy agriculture); reforestation in catchment areas as one tool to address flooding.

1. The World Bank 2012: *World Development Indicators*. Available Online: <http://databank.worldbank.org/data/views/reports/tableview.aspx> (last Accessed 19 July 2013_).

2. RECOFTC, ASEAN Social Forestry Network (ASFN) and SDC, (2010). *The Role of Social Forestry in Climate Change Mitigation and Adaptation*. Available online: [http://www.recoftc.org/site/uploads/content/pdf/ASFN%20v10%20-web%20version%20\(compressed\)_139.pdf](http://www.recoftc.org/site/uploads/content/pdf/ASFN%20v10%20-web%20version%20(compressed)_139.pdf) (last accessed Oct 16, 2013).

3. Chao, S. (2012). *Forest Peoples: Numbers across the world*. Forest Peoples Programme. Available online: http://www.forestpeoples.org/sites/fpp/files/publication/2012/05/forest-peoples-numbers-across-world-final_0.pdf (last accessed Oct 21, 2013).

4. The increasing trend of forest area reported for 2005-2010 is due to an increase in rubber plantations; FAO, (2010). *Global Forest Resources Assessment 2010, Country Report: Thailand*.

5. Ibid

6. Global Adaptation Institute (GAIN) Index, (2011). *Thailand*. Available online: <http://index.gain.org/country/thailand> (last accessed February 28, 2013).

7. There is a strong correlation between a country's GDP per capita and its overall and readiness scores and an inverse correlation with vulnerability. To account for this relationship, each of the overall, vulnerability and readiness scores have corresponding "GDP Adjusted" scores as well.

8. Germanwatch, (2012) *Global Climate Risk Index*

9. Ibid

10. Asia Pacific Adaptation Network (2012). *Mangrove reforestation and protection*.

Community forestry in Thailand

Although Thailand has not yet passed formal legislation that recognizes community forestry, over 8,300 community forests have been registered with the Ministry of Natural Resources and Environment's (MONRE), Royal Forest Department (RFD) covering approximately 500,000 ha, and there are over 3,500 additional community forests in the pipeline for registration.¹¹ However, a major area of contention surrounding community forestry in Thailand is the illegality of community use of forests in national parks, reserves and sanctuaries. This impacts approximately 2 million people dependent on forest resources in these areas.¹²

Faced with rampant deforestation in the 1970s, the Thai government began to recognize community forestry as a tool to address the loss of its forests. In 1989 the government issued a moratorium on logging.¹³ In 1991 it began drafting a Community Forest Bill, along with non-governmental organizations (NGOs) and other partners, to formalize community management of forests. In November 2007, after 18 years of debate, the National Legislative Assembly passed the Community Forest Bill; however, a subsequent change in government caused the bill to be revoked. Efforts have continued ever since to revise the bill to get it passed once again by the national assembly, but this effort has not been successful.

The bill, in its current form, contains two especially controversial provisions that would limit the rights of local people over forest areas. The first (Article 25) states that in order for a community to gain community forestry rights, they must prove to have lived in and managed a particular forest area for at least 10 years prior to the establishment of the protected area. The second provision (Article 35) states that only non-timber forest products (NTFPs) are allowed to be collected, prohibiting logging within the protected community forest areas. The bill would also have created provincial level community forest committees to audit and enforce timber-harvesting regulations and to report to a national community forest policy committee.¹⁴

The split of forestry responsibilities within MONRE between RFD and the Department of National Parks, Wildlife and Plant Conservation (hereafter referred to as Department of National Parks) has contributed to a lack of coordination on the community forestry program. While conservation NGOs and the Department of National Parks support limited human activity in national parks and other protected areas, community forestry proponents and RFD support local communities in continuing to use forests sustainably after protected area boundaries are established. The conflict can be exacerbated by unclear boundaries between protected areas and neighboring forest and farm areas. There is also a contrast between Thailand's constitution (2007), Decentralization Act (1999) and the National Park Act of 1961. The Constitution and the Decentralization Act empower communities and local governments to actively manage their natural resources. However, the National Park Act opposes community forestry by prohibiting the use of timber and NTFPs within park boundaries.

Nevertheless, community forests have continued to be established despite a strong legal framework. Those community forests established under RFD are usually set up with the financial and organizational support of local NGOs. Networks are developing to facilitate information sharing on community forestry and to advocate for legislative reform.¹⁵ These networks operate at all levels, from the tambon (sub-district) through to the national Community Forestry Assembly and include the Western, Eastern, Northern and Isaan Community Forest Networks.¹⁶

¹¹ Ongprasert, P. (2012). *Civil Society Engagement in Promoting Forest Good Governance and Climate Change Adaptation: Experience sharing from Thailand*. Presentation given at The 6th ASEAN Social Forestry Network (ASFN) Meeting, Apsara Angkor Hotel, Siem Reap, Cambodia, 14th June 2012.

¹² Sumarlani, Y. (2004). *How Participatory Is Thailand's Forestry Policy?* Institute for Global Environmental Strategies (IGES), 52.

¹³ Keßler, C (1998). *Community Forestry in Thailand*. The World Bank/WBI's CBNRM Initiative.

¹⁴ Weatherby, M and Soonthornwong, S. (2008). *The Thailand Community Forest Bill*. Available online: <http://www.rightsandresources.org/blog.php?id=34> (Last Accessed December 17, 2012).

¹⁵ Keßler, C (1998). *Community Forestry in Thailand*. *The World Bank/WBI's CBNRM Initiative*.

¹⁶ RECOFTC, (2011). *Community Forestry in Thailand*. Available online: <http://www.recoftc.org/site/Community-Forestry-in-Thailand> (Last accessed October 10, 2012).

Expected climate change impacts in Thailand

According to the Global Adaptation Institute's Index, Thailand is the 52nd least vulnerable country in the world to the impacts of climate change and the 69th country most ready to be able to adapt to them.¹⁷ The Index attributes the country's low vulnerability to a high percentage of the population (98%) with access to an adequate water supply from an improved source. However, Thailand's vulnerability is increased due to the high percentage of the population (over one quarter) living less than 10 meters above sea level. Thailand also scored poorly on the Gain Index scale in the areas of number of health workers per capita and political stability.¹⁸

Future precipitation trends under climate change in Thailand remain uncertain in part due to a lack of historical, locally-specific, meteorological data. However, it is predicted that Thailand will likely experience more intense precipitation events, increased tropical storm intensities, increased droughts and floods associated with El Niño events and more variable monsoons.

Flooding

Water and flood management rank high as adaptation priorities for Thailand. In 2011, more than four million households were affected by the worst flooding in Thailand's history, after five consecutive typhoons.¹⁹ Over the past 30 years the number and impacts of flood disasters have increased despite improvements in monitoring and warning systems. This is due in part to increased population in flood prone areas. Tourism is an especially vulnerable industry, with many popular destinations located in low-lying coastal areas that are susceptible to storm surges, typhoons and flooding.²⁰

Drought

In 2010, 64 provinces in Thailand were declared disaster areas due to a severe drought. Future droughts pose threats to the national economy, which is heavily reliant on natural resources, with a large percentage of its population engaged in agriculture. Most agriculture in Thailand is rain-fed. Rice farming is particularly sensitive to rainfall and temperature variability and salinity intrusion from sea level rise and extreme weather events. The most significant risks for farmers are prolonged drought after planting, in addition to flooding during harvest time. Thailand is the number one exporter of rice in the world and among the largest exporters of food overall. Therefore food security will be less of an immediate climate issue than the economic impacts of agricultural uncertainty. The use of drought tolerant species, crop diversification and water storage are important adaptation techniques being used. Additionally, insurance schemes for drought have been explored, such as a 2007 World Bank project in the Pak Chong district of Nakhon Ratchasima that piloted drought insurance for maize farmers.

¹⁷. Global Adaptation Institute (GAIN) Index, (2011). *Thailand*. Available online: <http://index.gain.org/country/thailand> (last accessed February 28, 2013).

¹⁸. Global Adaptation Institute (GAIN) Index, (2011). *Thailand*. Available online: <http://index.gain.org/country/thailand> (last accessed February 28, 2013).

¹⁹. WWF Thailand, (2012). *Thailand National Policy and Institutional Arrangements for Wetland Climate Change Impact and Adaptation (Draft)*.

²⁰. Zou, L and Thomalla, F, (2008). *The Causes of Social Vulnerability to Coastal Hazards in Southeast Asia*. The Stockholm Environmental Institute.



Community forestry and climate change adaptation

Community forestry in Thailand has an important role to play to increase local adaptive capacity to climate change. In the context of agricultural uncertainty, community forestry provides an effective approach to improved livelihoods both directly (increased access to forest food products) and indirectly (increased employment and entrepreneurial opportunities and livelihood diversification). Community forestry can also help leverage social capital and knowledge with regards to adaptive forest management, all while providing institutional mechanisms to prepare for disaster. Furthermore, through forest restoration activities, community forestry can help regulate microclimates. RFD is beginning to promote adaptation activities in the Community Forests that it oversees, often in conjunction with awareness-raising on REDD+.

Forest management

Thailand's forests have received much political attention amid concerns that loss of forest cover in rain catchment areas may have contributed to the 2011 floods. This, in part, contributed to Prime Minister Yingluck Shinawatra announcement in February 2012 that the government would invest 950 million baht in reforestation activities across the country. While forests may play a role in absorbing rainwater and reducing water flow, they cannot prevent extreme events and forest restoration must be used along with other disaster reduction strategies. Inefficient water management, climate change and loss of forest, natural water discharge areas and wetlands all likely contributed to the 2011 disaster.²¹

Nevertheless, RFD has moved forward with reforestation goals in response to the 2011 floods and has encouraged numerous related adaptation activities through the community forestry program. RFD has been distributing between 50-150 million tree seedlings a year to urban and community forest areas for enrichment planting.²² Community forests have been encouraged to plant drought tolerant species (especially in the northern provinces), as well as edible tree species, which help to diversify livelihood options. Another focus of RFD is to provide capacity building on forest-based ecotourism and to link local people to markets to sell NTFPs at higher prices.²³ However, many activities like these that help to build community resilience have not necessarily been designed in direct response to climate change.

Mangroves

Community-based mangrove management is another key adaptation strategy that increases coastal resilience. Thailand's mangrove forests help mitigate damage from sea level change and tropical storms. The trees' large root systems and ability to absorb 70-90% of wave energy make them highly resilient to impacts from extreme storms.²⁴ However severe coastal erosion has been reported in 23 coastal provinces, which lost 128,000 hectares between 1961 and 2002,²⁵ with Bangpakong and MaeKlong coastal ecosystems being most at risk. In addition, mangroves are at increasing risk from shrimp farming ventures and urbanization. RFD and various NGOs that have promoted community-based mangrove management over the years are engaging communities in mangrove ecosystem restoration and protection projects with climate change adaptation in mind (see Table 3 for more information on relevant projects).

²¹. WWF Thailand, (2012). *Thailand National Policy and Institutional Arrangements for Wetland Climate Change Impact and Adaptation* (Draft).

²². Enrichment planting is defined as the introduction of valuable species to degraded forests without the elimination of valuable individuals, which already existed at that particular site; Karam et al, (2012). *Impact of Long-Term Forest Enrichment Planting on the Biological Status of Soil in a Deforested Dipterocarp Forest in Perak, Malaysia*. The Scientific World Journal. 1.

²³. Personal communication, Preecha Ongprasert (2012).

²⁴. FAO, (2007). *The role of coastal forests in the mitigation of tsunami impacts*.

²⁵. Asia Pacific Adaptation Network (2012). *Mangrove reforestation and protection*.

The following sections summarize existing approaches and provide recommendations on how community forestry may be used to advance climate change adaptation in five key areas in Thailand: Policies and planning, legal reform, project development, public funding and private financing and capacity building. A roadmap diagram at the end of this report visually displays recommended actions for relevant stakeholders to uptake through the year 2020.

CASE STUDY: Pred Nai Mangrove Conservation and Development Group

Project duration: 1993 – Ongoing

Project managers: Local community groups; RECOFTC – The Center for People and Forests, Thailand Country Program

Donors: Norwegian Agency for Development Cooperation (Norad); the Swedish International Development Cooperation Agency (Sida); the Royal Thai Government and; Mangroves For the Future

Location: Pred Nai Village, Huang Nam Khao Sub-district, Muang District, Trat Province



Project outcomes and lessons learned: Healthy mangrove ecosystems serve a critical role for climate adaptation in coastal communities across Asia. However, over the past few decades, mangrove forests have been rapidly destroyed across the region for commercial aquaculture and other development interests. Pred Nai village falls within one of the largest contiguous fragments of mangrove forests in Thailand, spanning 1,920 hectares in Trat Province, near the border with Cambodia. The traditional way of life for the community is largely connected to mangrove ecosystems as many community members harvest crabs and other marine resources to supplement income from fruit and rubber plantations.

Over time, the Pred Nai Conservation and Development Group has initiated a variety of local sustainable development activities that now play a key role in climate adaptation. This includes a solution, devised by the villagers, to place blocks of rubber cubes along the seafront and put up bamboo poles on mudflats. These reduce the power of waves and turn the area into a rich habitat for marine life. This has been complemented with the establishment of ‘crab banks’ and an awareness campaign called ‘Stop catching hundreds to catch millions.’

These actions have resulted in improved mangrove yields despite the climate challenges and external pressures the community has faced. For example, in 2005, the annual yield of marine products from the forest weighed about 50 tons and was worth 2.5 million baht. In 2009, the yield of crabs alone increased to 95 tons, worth a total of 4.7 million baht. In 2011, the village group worked with RECOFTC to launch the “Strengthening the Community-based Coastal Resources Management Network through Community-based Learning Centers” project, which trains neighboring communities in six of Trat’s sub-districts in community forest-based adaptation, conservation and income generation.

This story underlines the potential of rural communities to adapt to climate change with the right support and guidance. The experiences from Pred Nai are being shared and expanded into surrounding villages through a network of six community learning centers as part of a US \$150,000 Mangroves for the Future project implemented by RECOFTC and partners.

Policies and planning

The issue of forests and climate change in Thailand has been addressed primarily in the mitigation context, namely REDD+. Adaptation to climate change is a relatively new policy issue for the Thai government outside of the Bangkok Metropolitan Area. While overall ministry response has been low, adaptation efforts have primarily focused on agriculture, industry, infrastructure, tourism and public health, and less so on forestry. Thailand is on its way to becoming a regional leader on climate change research, with policies to support climate modeling and the building of relevant research institutions. While policies have mentioned the importance of supporting adaptive capacity at the local level, the revision of the legal framework for community forestry is a necessary step for securing local people's rights over forest areas, which will make for resilient forest-based communities (see Legal Reform section).

Key institutions

MONRE's Office of Natural Resources and Environmental Policy and Planning (ONEP) was designated as the national focal point agency of the United Nations Framework Convention on Climate Change in 2004, with the Office of Climate Change Coordination established as its secretariat in 2007. The National Board on Climate Change Policy (or National Climate Change Committee) was also established under ONEP in 2007. Including ministry and research institute representatives, the national board is the highest national body in approving climate change policies and contains a sub-committee on adaptation.

Key policies

National level adaptation activities have so far been centered on natural disaster prevention, especially for urban areas. Policies on disaster management and community level disaster preparedness are quite strong.²⁶ The Disaster Prevention and Mitigation Act of 2007 authorized local governments to take responsibility for disaster management,²⁷ and the Emergency Flood Reconstruction Plan 2012 set up a committee to better prepare for future flooding events and improve existing flood prevention systems (both infrastructure and natural based).²⁸ The key policies relevant to community forestry and climate change adaptation are listed in Table 1 below.

Thailand Climate Change Master Plan (2013-2050)

As the Thailand's Strategic Plan on Climate Change (2008-2012) came to an end in 2012, a new policy document with a much longer view, the Thailand Climate Change Master Plan (2013-2050). The initial strategic plan formulated by MONRE required relevant ministries to form climate subcommittees, coordinate adaptation activities and provides comprehensive guidelines for national and local level agencies to develop their own climate change action plans.²⁹ Emphasis in the Strategic Plan was given on climate impacts research and modeling (such as the climate risk and hotspot assessment), building climate leadership institutions, as well as capacity building for a variety of stakeholders.

The follow up master plan is expecting cabinet approval in 2013 after a long consultation process with a wide range of stakeholders from government, academia and the private sector.³⁰ The 40-year vision is divided into three phases, with a review required every five years. In the first phase (2-5 years) the master plan aims to address urgent adaptation needs, increase knowledge and awareness of climate change impacts, promote

²⁶. Personal Communication, ChanyuthTepa, (2012).

²⁷. 34 Adaptation Knowledge Platform, (2010). *Scoping Assessment for National Implementation in Thailand*.

²⁸. WWF Thailand, (2012). *Thailand National Policy and Institutional Arrangements for Wetland Climate Change Impact and Adaptation (Draft)*.

²⁹. Adaptation Knowledge Platform, (2010). *Scoping Assessment for National Implementation in Thailand*.

³⁰. Adaptation Knowledge Platform, (2010). *Scoping Assessment for National Implementation in Thailand*.

integrated water resource management, facilitate sustainable land use planning by local authorities and of particular interest, strengthen community adaptation capacity. The second phase (6-10 years) aims to obtain international technical cooperation, build financial mechanisms to support climate change adaptation plans, develop networks of researchers and a research database of climate change impacts at local and international levels. The final phase (over 10 years) aims to establish a database of food, plant and wildlife species, to promote conservation of indigenous species and ecosystems to be able to cope with climate change and to support ongoing research on climate change modeling, especially for local-level impacts.

Community participation and ecosystem-based adaptation including forestry are highlighted within the Plan's discussions of mitigation and adaptation, and there is also brief mention of community forests. While many measures in the Master Plan are broad to allow room for community level implementation,³¹ the key measures in the master plan relevant to community forest-based adaptation are summarized in bullet points below:

- Law and legal reform that promotes community participation and strict law enforcement.
- Actively promote community rights, community forest, sustainable livelihoods and issuance of community land title.
- Actively promote knowledge exchange between communities in natural resources management for climate change adaptation management and in partnership with local academic and research institutions.
- Restore mangrove, peat and coastal wetlands and corals in participation with communities and other involved stakeholders as to increase nursing and breeding grounds for aquatic animals, as well as to increase adaptive capacity to climate change.
- Urgently identify hotspots of inland freshwater, watershed and forest ecosystems at basin and local scales that are being risked to degraded conditions. Develop clear risk indicators and scenarios for better public communications.
- Conduct assessment on unsustainable land use cases that can potentially increase the degree of climate change vulnerability, considering the assessed climate risks at regional and national scale of land uses and forests.
- National forest ecosystem restoration in every area of the country especially in state owned lands and important river basins, with expected results within ten years.
- Use and increase tax and tariff measures as incentives in soil and forest restoration. Use of economic tools such as forest bonds and carbon credits.

The master plan encourages all stakeholders at every level and sector to work together in an integrated manner to prepare adaptation plans for the short, medium and long term. Individual ministries are currently developing their own climate change mitigation and adaptation strategies under the coordination of ONEP, and this is gradually occurring at the sub-national and provincial levels also.³² The Ministry of Energy, Ministry of Agriculture and Ministry of Health, among others, have completed plans.³³ There is a need for improved coordination and collaboration among agencies and between central and local government, including in the sharing of key data and expertise. NGOs have expressed difficulty in coordinating with local and regional level government agencies as there is very low awareness of climate change adaptation.³⁴

³⁰. Adaptation Knowledge Platform, (2010). *Scoping Assessment for National Implementation in Thailand*.

³¹. Personal communication, Prattana Meesinjarean (2012).

³². Personal communication Prattana Meesinjarean (2012).

³³. Personal communication Prattana Meesinjarean (2012).

³⁴. Adaptation Knowledge Platform, (2010). *Scoping Assessment for National Implementation in Thailand*.

Table 1. Key policies in Thailand with relevance to community forest-based adaptation

Policy	Relevance to community forest-based adaptation
National Master Plan on Climate Change (2013-2050) (DRAFT)	The draft master plan lays out short, medium and long term measures to address mitigation, adaptation and cross-cutting issues. It refers to ecosystem- and community-based adaptation and promotes the rights of community forest groups.
11 th National Economic and Social Development Plan (2011-2015)	Guides the direction of the overall economic and social development of Thailand. It is renewed every 5 years with a new vision and development direction. The 11 th Plan emphasizes communities' role in planning and decision-making with regard to natural resource management. It identifies climate change as a major risk to natural resources, including biodiversity, coastal resources, wetlands and forests, with impacts on agriculture and tourism. The plan lays out "enhancing adaptive capacity to achieve a climate resilient society" as one of the strategies to address this.
National Forestry Policy (1985)	The National Forestry Policy is the long-term policy plan for Thailand's forests and forestry management that is administered by RFD. The policy has set an ambitious goal in maintaining and expanding national forest cover to 40% of the country's land area (made up of 25% protected forest and 15% production forest). The implementation of this policy is the responsibility of all sectors including national and local government, NGOs, private sector and individual citizens. The policy covers: mechanisms for forestry management by governmental agencies and relevant stakeholders, building public awareness and developing incentives for forestry conservation, using participatory forestry planning, relocation of minorities, preventing encroachment and law enforcement. Forest-based adaptation is not given significant attention.

Recommendations for policy and planning

- **Develop ministerial-level adaptation strategies** within MONRE, RFD, Department of National Parks and Department of Marine and Coastal Resources (with regard to mangrove forests), with clear strategies identified for community forest and community mangrove-based adaptation. The effectiveness of the master plan's adaptation policy will depend on individual Ministries efforts to overcome fragmentation.
- **Improve coordination between local projects and government agencies** to support on-the-ground adaptation efforts. The Ministry of Interior or ONEP should take the lead to coordinate all relevant government offices, research institutes and NGOs working on issues related to adaptation and the flow of information between the grassroots and national levels. If this is not possible, a new crosscutting agency should be established to assume this responsibility. Government agencies should support NGOs already engaged at the local level for consultation with local communities to identify and prioritize climate change threats and conduct participatory adaptation planning.
- **Prioritize community-based adaptation measures in the master plan**, once implementation begins. Implementation by line agencies and local authorities is critical and should be periodically reviewed and assessed by the National Board on Climate Change Policy. In future revisions of the master plan, sector specific sub-policies on community forest-based adaptation should be included to focus the efforts of government agencies.
- **Develop and distribute guidelines on community forest-based adaptation** to existing community forest user groups recognized by RFD and supporting district-level government agencies.

- **Implement participatory vulnerability assessments in forest-dependent communities**, which will go towards incorporating adaptation strategies in forest management plans. This process should be carried out by Tambon Administrative Organizations (TAOs) and community forest user groups, in collaboration with RFD and the Department of National Parks.³⁵

³⁵ Preecha Ongprasert, (2012). Personal communication. .



Legal reform

The Thai Constitution, 11th National Economic and Social Development Plan and other policies emphasize decentralization, community rights and participation, as well as sustainable livelihoods and resource management. The National Climate Change Master Plan also promotes community forestland tenure and participatory planning for community forest management through the TAOs. However, there is a conflict between laws that promote decentralization and others that assign management rights to the government and restrict access to forest areas.

The Decentralization Act and the constitution have been used as channels to move forward with the establishment of community forests in Thailand despite the failure of the Community Forest Bill. Local TAOs develop their own process for the establishment of community forests under the oversight of RFD. However, a much clearer legal definition, emphasizing good governance, transparency, impartial law enforcement and public participation, is needed to reduce conflict between local communities and authorities.³⁶

Boundaries in areas where community forests and protected areas may overlap especially need clarification. From 2004 to 2008, the Joint Management of Protected Areas project led by the Seub Nakhasathien Foundation, Inter Mountain Peoples Education and Culture in Thailand and Raks Thai, attempted to address these underlying issues of land tenure rights through the use of participatory land-use demarcation, mapping and the strengthening of relationships between protected area government officials and community networks.³⁷

Outside of these protected areas, the issue of land tenure is not as critical as in other Southeast Asian countries, as the de facto right of inhabitants to use land they occupy is frequently respected. However, as with common property arrangements in general, this may impede the willingness of communities to make long-term investments in climate change adaptation planning or implementation.

The revision and passing of the Community Forest Bill to address the concerns of all stakeholders would provide a formal framework to establish the rights of forest-dependent people to access and manage forest resources and facilitate their ability to adapt to climate change. The focus on climate change mitigation (and to a lesser extent, adaptation) is raising awareness of the community forestry movement in Thailand and may help drive forward legislation, particularly as security of tenure is a key component of REDD+ project implementation.

³⁶. Adaptation Knowledge Platform, (2010). *Scoping Assessment for National Implementation in Thailand*.

³⁷. Seub Nakhasathien Foundation, (2009). *Joint Management of Protected Areas (JoMPA) Project Completion Report*.

³⁸. Weatherby, M and Soonthornwong, S, (2008). *The Thailand Community Forest Bill*. Available online: <http://www.rightsandresources.org/blog.php?id=34> (Last Accessed December 17 2012).

³⁹. Foreign Law Bureau, Office of the Council of the State (2007). *Constitution of the Kingdom of Thailand 2007*. Available online: <http://www.asianlii.org/th/legis/const/2007/1.html> (Last accessed January 28, 2013).

⁴⁰. Wong, J. (2007). *Thailand: Decentralization, or What Next?*

⁴¹. Sopchokchai, O, (2001). *Good Local Governance and Anti-corruption Through People's Participation: A Case of Thailand*. Public Sector Reform Project.

Table 2. Laws relevant to community forest-based adaptation in Thailand

Policy	Relevance to community forest-based adaptation
Community Forest Bill (2007) (DRAFT)	A major objective of the Community Forest Bill is to promote community participation in sustainable management and utilization of natural resources in Thailand. The bill defines a legal community forest as one that is located outside of a protected area and states that all community forest organizations must be properly registered with RFD. They must have a management plan in place and clearly demarcated forestland. As currently drafted, the bill is likely to prevent more than 20,000 communities from accessing and managing their current community forests, which are located in previously designated protected areas. Furthermore, only NTFPs are allowed to be collected, timber harvesting is prohibited. The bill continues to be highly controversial and has not been successfully passed. ³⁸
Thai Constitution (2007)	The Constitution stipulates the rights and freedoms of Thai people to participate with government agencies in environmental protection programs aimed at sustainable development. It mentions that persons so assembling as to be a community, a local community or a traditional community shall have the right to conserve or restore their customs, local knowledge, good arts and culture of their community and of the nation and participate in the management, maintenance, preservation and exploitation of natural resources, the environment and the biological diversity in a balanced and sustainable fashion. ³⁹
Decentralization Act (1999)	The Decentralization Act served as the foundation for the process of decentralization, calling for the creation of a Decentralization Committee to play a key role in formulating policy. The Decentralization Act spelled out the powers and duties to provide public services for each type of local government organization. ⁴⁰
Tambon Council and Tambon Administration Organization (TAO) Act (1994)	This TAO Act aimed to decentralize administrative power to local people, to revitalize people's participation in community development affairs and to decentralize decision-making power to people at the Tambon and village levels. ⁴¹
Reforestation Act (1992)	The Reforestation Act directly supported reforestation by private sector and individuals for wood-based industries.
National Environmental Quality, Conservation and Protection Act (1992)	The National Environmental Quality, Conservation and Protection Act gave MONRE the authority to regulate vulnerable ecological areas and to consider these environmental protection areas that require particular management and protection.
National Reserved Forest Act (1964)	Along with the National Park Act of 1961 (below) this forms the basis for control and maintenance of National Reserved Forests and other protected areas in Thailand. The National Park Department oversees the management, control and use of National Reserved Forest. Logging or collection of forest products and logging of reserved timber is allowed, on an individual basis, after obtaining permission from the National Parks Department.
National Park Act (1961)	The objective of the National Park Act is to protect and oversee the ecology and natural habitat of plants and animals in national park areas. It is also to prevent harmful and destructive activities and the collection of wood and NTFPs in national park areas.
Forest Act (1941, amended in 1948, 1982 and 1989)	The Forest Act laid out the principles for the long-term exploitation of forests to benefit the state. The objective of this act is to prevent illegal logging of endangered species, forest clearing and burning, extracting forest products and illegal forestland occupation

Recommendations for legal reform

- **Streamline the passage of a revised community forestry bill.** Formalizing community forestry in law will provide the necessary security local people need for long-term management of forest areas in light of climate change. Through a consultative process involving local people, academics and other stakeholders, the revision of the bill should address issues of climate change adaptation, food security and forest-based enterprises.⁴² This may include the requirement for allowances for agricultural production in forest areas by communities and agroforestry. Equitable access to forest resources must be ensured, with particular attention given to marginalized groups such as women and ethnic minorities.
- **Leverage community forest networks towards safeguarding and advocating legal rights** of forest-dependent people, hill tribes and ethnic minorities, in light of climate vulnerabilities.
- **Employ more transparent and participatory approach in the forest sector** so that forest dependent people can fully participate in adapting to climate change. Participatory land use mapping such as that undertaken by the Joint Management of Protected Areas project should be employed to clarify boundaries between community forests and protected areas.

⁴² Zurcher, (2005). *Public participation in community forest policy in Thailand: The influence of academics as brokers. Danish Journal of Geography* 105(1): 77-88.



Project development

There are a high number of community forest-based adaptation projects that have been implemented in Thailand in recent years, with support from various government agencies as well as international and national NGOs. MONRE, for instance, has implemented capacity building projects for TAOs and local communities on integrated management of biological diversity and forest resources in the context of climate change adaptation. NGOs have implemented a wide variety of adaptation projects from participatory action research on impacts to community-based mangrove adaptation.

One particular Thai NGO that has led the way in promoting community forest-based adaptation is the Raks Thai Foundation. Raks Thai has worked with a variety of international NGOs such as CARE International, USAID, RECOFTC and UN-SCAP to promote community-based livelihoods and the right to access natural resources. It began introducing climate change adaptation into its disaster preparedness work with local communities in 2008. Raks Thai is undertaking projects that include community-based watershed management at three project sites in the north of Thailand and a national research program along the Andaman coast, looking at coastal ecosystem degradation, community livelihoods and natural disaster preparedness. Raks Thai is working with RECOFTC's Thailand Country Program to conduct research on how community forests can adapt to the expected impacts of climate change in the highlands and with the Thailand Research Fund, UNDP, Thai Red Cross and SDF to support pilot adaptation projects in the north, northeast and south of Thailand.⁴³

A summary of the adaptation project types in Thailand that international organizations have been involved with is shown in Table 3, results gleaned from the "Report on Status of Climate Change Management in Thailand."⁴⁴ Table 4 provides a number of examples of forest-based adaptation projects being undertaken in Thailand.

Table 3. Climate change adaptation project types and partner agencies

Sector	Estimated number of projects	Partner agencies involved
Capacity building for climate change	9	ADB, GEF, IUCN, Japan Bank for International Cooperation, Mangroves for the Future, RECOFTC, UNDP, UNEP, World Bank.
Research on adaptation and mitigation	26	ADB, British Council, GTZ, Hadley Center UK, the Mekong River Commission, SEI, Southeast Asia Regional Center System for Analysis, Research and Training (START), UNEP, United Nations Institute for Training and Research (UNITAR), World Bank, World Fish Center, RECOFTC.
Awareness-raising and public participation	12	FAO, UNDP, UNEP, World Bank, RECOFTC.
Building institutional capacities and coordination	8	ADB, SEA-START, UNDP, UNEP, World Bank.

⁴³ Personal Communication, ChanyuthTepa, (2012).

⁴³ Thai Water Partnership and the Global Water Partnership Southeast Asia, (2010). *Report on Status of Climate Change Management in Thailand*. Available online: http://www.gwp.org/Global/GWP-SEa_Files/GWPSEA_Climate%20Change%20Report.pdf (last accessed Oct 21, 2013).

⁴⁴ Thai Water Partnership and the Global Water Partnership Southeast Asia, (2010). *Report on Status of Climate Change Management in Thailand*. Available online: http://www.gwp.org/Global/GWP-SEa_Files/GWPSEA_Climate%20Change%20Report.pdf (last accessed Oct 21, 2013).

Table 4. Selected forest-based adaptation projects in Thailand (not a comprehensive list).

Project and partner(s) (if any)	Geographic Scope	Description
Khon Kaen Province (Raks Thai Foundation)	Sub-National	The first phase of this 3-year project focused on watershed restoration. Currently in the 2nd phase, the focus is now on landscape restoration and local livelihoods, including building resilience against flooding and drought such as through diversified tree canopies. The development of sustainable forest management plans and land use mapping is being undertaken with 20 villages. Communities are also trained in monitoring forest health and adapting forest management plans as the climate changes.
Reduced Emissions from Deforestation and Forest Degradation in Nam Reab Watershed, Nan Province: A Community Forestry Initiative for REDD+ based on Climate Change Adaptation and Sustainable Forest Management (RFD, South Korean Forest Service and other partners)	Sub-National	This proposed one-year project would be Thailand's first REDD+ initiative based on climate change adaptation and sustainable forest management strategies. The project would bring together a partnership of 4 communities into a community forestry network with RFD, Department of National Parks, other government agencies, local organization administrations and civil groups to establish a process for community-based REDD+ and climate change adaption projects. In addition, the project will promote value-added NTFPs to improve long-term livelihoods. The South Korean Forest Service is participating as an international partner of this project.
Building coastal resilience to reduce climate change impacts in Thailand (CARE International and Raks Thai Foundation)	Sub-National	This project (running from 2011-2014) will be implemented in 4 provinces in Southern Thailand (Krabi, Trang, Chumporn and Nakhon Si Thammarat). It will focus on heavily populated coastal areas where erosion is likely to be exacerbated by rising sea level and increased storm surge and where increased salt-water intrusion is likely. Local government agencies, NGOs and around 10,000 vulnerable households will be targeted for resilience building. The project aims to integrate adaptation into sub national development and disaster risk reduction planning. The objective is for local government and NGOs to collaborate in facilitating innovative community based vulnerability assessments and adaptation activities.
Developing Sustainable Eco-friendly Communities: Community-based global warming mitigation and adaptation, Ban Huay Win Community Forest (Raks Thai Foundation)	Sub-National	Raks Thai Foundation launched this initiative in 2008 to build models of climate change adaptation and mitigation among subsistence communities in northern Thailand. Projects included an improved system of terraced rice cultivation and distribution of fuel-efficient stoves to reduce wood consumption, with the aim to demonstrate that climate change adaptation and mitigation can and should be considered together. Ban Huay Win village was one project area, which faced a significant threat from food insecurity and depended heavily on NTFPs especially when rice crops were impacted by drought.

Project and partner(s) (if any)	Geographic Scope	Description
Trang Province (Department of Marine and Coastal Resources and YadFon Association)	Sub-National	Four mangrove development stations were established as part of the Department of Marine and Coastal Resources' program to conserve and rehabilitate mangrove forests. The objectives of the project are to build capacity for community forestry management, increase partnerships between local community, government and NGOs, reduce illegal wood harvesting and set up Mangrove Protection Zones. The community nurseries have produced 225,000 mangrove seedlings for government and NGO planting activities. Approximately 2,240 hectares are protected by Mangrove Protection Zones, providing biodiversity habitat. Families are able to supplement their incomes by catching and selling crab and shrimp in the mangrove areas and making charcoal, gathering fuel wood, medicinal plants, tree bark and honey.
Mangrove Forest Rehabilitation in Pattani Bay (Prince of Songkla University and Wetlands International)	Sub-National	By working with local communities in three villages around Pattani Bay, this three-year project aimed to restore severely degraded sites of former mangroves. Local ownership of the project and effective community participation were considered crucial. The project focused its activities on strengthening community organization, building environmental awareness, mangrove rehabilitation through hydrological restoration and replanting of seedlings, support to alternative livelihood initiatives and information dissemination. The project has been able to support several income-generating activities and facilitated the replanting of 30 hectares of community mangrove forest for which a community-based management plan was prepared.
Mangrove Action Project (MAP) in Krabi, PhangNga and Ranong Provinces	Sub-National	MAP is involved in managing and facilitating a variety of community-based programs in the North Andaman region of Thailand. The projects are being carried out in fishery-dependent villages with the goal of empowering local communities through capacity building, community-based tourism, alternative livelihoods development and conservation, management and restoration programs.
Capacity Building on Adaptive Management in Forest Landscape and Sustainable Livelihood for Climate Change Mitigation and Adaptation (led by RECOFTC, with partners including WWF, SDF, Eastern Community Forest Network, Mangroves for the Future, Elephant Conservation Network and the Department of National Parks.)	Sub-National	The RECOFTC Thailand Program is performing action research with community leaders from seven communities in different provinces around the country. The project has been implemented since 2010 and will end in 2013. The goals include: 1) to develop tool and technique on Participatory Forest Assessment and Carbon Accounting; 2) to enhance community capacity on managing forest & agro-forest for climate change mitigation and adaptation; and, 3) to develop policy recommendation on climate change - mitigation and adaptation through lesson learned and knowledge sharing.

Project and partner(s) (if any)	Geographic Scope	Description
Mekong Adaptation and Resilience to Climate Change (Mekong ARCC) (USAID)	Regional	This regional USAID project (2011-2016) will work in Thailand, as well as the other three lower Mekong countries (Cambodia, Lao PDR and Vietnam), to 1) research and identify key climate change impacts for the region's most vulnerable populations and 2) assist communities in highly ecologically sensitive areas to adapt. As of July 2013, the project received proposals to fund "Ecosystem and Community-based Climate Adaptation and Resilience Building Initiatives" for the provinces of Chiang Rai and Sakon Nakhon, Thailand. ⁴⁵
The Royal Project Foundation – work related to community-based adaptation	National	With the support of the Royal Family, the Royal Project has set up a number of village-based community development projects with impacts for adaptation. They have focused on development of water resources for agricultural activities, topsoil preservation, research on plant and animal species suitable for local areas in a changing climate, sustainable livelihoods and integrated resource management. They also aim to improve observation, monitoring and prevention. Forestry related projects include renewing forested land in key areas in upstream and reservoir areas and expanding moist forests to be a buffer zone for forest fire prevention. ⁴⁶
Sustainable Development Foundation (with Support from DANIDA)	Sub-National	SDF activities have focused on capacity building activities in support of networks of vulnerable groups such as sustainable agriculture and community forestry networks, especially in upland areas in northern Thailand and with fishing networks in southern Thailand. ⁴⁷
Prednai community, Trat Province (RECOFTC and other partners)	Sub-National	The community of Pred nai is leading a project to restore 1,850 hectares of mangrove forest to improve their ability to weather tropical storms. Their experiences are being shared and expanded into surrounding villages through a network of seven Community Learning Centers in six Thambons as part of US \$150,000 Mangroves for the Future project implemented by RECOFTC and partners. (see Case Study Box for more information)

⁴⁵ Mekong Adaptation and Resilience to Climate Change. *Our Work*. USAID. Available online: <http://mekongarcc.net/ourwork/our-work> (last accessed Oct 21, 2013)

⁴⁶ Thai Water Partnership and the Global Water Partnership Southeast Asia, (2010). *Report on Status of Climate Change Management in Thailand*. Available online: http://www.gwp.org/Global/GWP-SEa_Files/GWPSEA_Climate%20Change%20Report.pdf (last accessed Oct 21, 2013).

⁴⁷ Adaptation Knowledge Platform (2010). *Scoping Assessment for National Implementation in Thailand*.

Recommendations for project development

- **Establish community forest adaptation demonstration sites in upland areas.** Drawing from lessons learned from various projects, there is a need for creation and promotion of community forest-based adaptation demonstration sites to showcase best approaches and mechanisms, incorporating both local indigenous knowledge and current climate science. Lessons learned from community-based mangrove adaptation demonstration projects should be transferred to upland forest projects.
- **Increase uptake of participatory vulnerability assessments** in diverse forestry projects, with enhanced focus on gender and marginalized groups. The communities themselves must lead this process, so that adaptation activities do not become overly prescriptive.
- **Integrate adaptation into development of REDD+ projects.** With REDD+ still in its early stages in Thailand, there is opportunity to integrate adaptation objectives. At a minimum REDD+ projects must not undermine the adaptive capacity of local communities.
- **Develop systems, methodologies and standards for prioritizing projects.** Within the Master Plan it is critical for adaptation projects to be prioritized to fit capacity and available budget. Projects that foster collaboration between community forest groups, NGOs and government agencies should be prioritized in such a system.



Public funding and private investment

As a middle-income country, Thailand is not eligible for large-scale international funding for adaptation or community forestry, as compared with neighboring countries. However there is a diverse portfolio already available for funding community-based adaptation in Thailand, with support being given from government agencies and various international organizations. There is great potential to increase adaptation funds in the future through private sector corporate social responsibility (CSR) and the development of community forest group adaptation funds.

Public funding

The Thai government is financially supporting pilot projects currently underway (for example, through RFD), although most adaptation funding at the national level so far is for data collection and training rather than project implementation. RFD currently provides technical and financial support to community forest groups (approximately 50,000 baht/year each).⁴⁸ If these groups increase their income through scaled-up marketing of NTFPs or sustainably harvested timber, they may be able to allocate more income to adaptation projects.

International support

A significant amount of funding, from UNDP, GIZ and others for mangrove restoration and disaster reduction projects flowed into Thailand after the 2004 tsunami.⁴⁹ There is also strong donor interest in adaptation for Asian megacities such as Bangkok after the 2011 floods. Technical and financial support for adaptation is being provided by international organizations such as MRC, UNDP and ADB.

Funding from international donors would be easier to access if Thai policy were more clearly defined with regard to community forest-based adaptation and there were a clear mechanism for how funding would reach local people for project implementation. Enhanced research and knowledge of local level impacts and vulnerabilities, such as the ongoing climate risk and hotspot assessment by MONRE, will also help to secure international funding for projects. ONEP and UNDP are currently undertaking a budget gap assessment to determine climate change mitigation and adaptation funding priorities.⁵⁰ In addition, with REDD+ in Thailand still at the preliminary stages, there is opportunity to use international mitigation funds to support community forest-based adaptation.

Private investment

Private sector CSR is strong in Thailand and a significant amount of private funding has been donated to community forestry groups.⁵¹ Private sector funding is also likely to be used for adaptation. However, the creation of a national community forestry foundation that could raise funds through corporate taxation (or other forms of tax e.g. fuel) would be a more secure long-term source of finance for forest-based adaptation efforts. This foundation could be coordinated by the RFP and would need to be transparent and easy to access by NGOs and other project developers.

⁴⁸. Personal Communication, Rattaphon Pitaktesombat (2012).

⁴⁹. Ibid.

⁵⁰. Ibid.

⁵¹. Personal Communication, Preecha Ongprasert (2012).

An adaptation fund for community forest groups (possibly funded through a PES mechanism) is being considered in some pilot project areas in Thailand. These funds could be allocated for emergency needs such as forest fires, landslides or drought and to long-term adaptation planning and project implementation, similar to the model of Community Forest User Groups (CFUGs) in Nepal.

Recommendations for public funding and private investment

- **Develop guidelines for local organizations and community forest groups on accessing adaptation funding** from government and international donors and integrating such funds into climate change planning. Fund management and accounting systems should be as close to the project level as possible, ideally at the TAO or district rather than national level.
- **Require the establishment of community adaptation funds** for community forest groups who register with RFD. Each community forest group through a consultative, multi-stakeholder process should develop rules for application of the adaptation funds. These funds may direct a portion of income generated through forest-based enterprises to disaster management.
- **Develop a national community forestry foundation.** The foundation may acquire funds through taxation (of private sector and/or civil society) and dedicate a portion to adaptation planning and project implementation.
- **Ascribe increased budget priority to Climate Change Master Plan implementation,** with forest-based adaptation measures receiving adequate resource allocation. Given limited financial resources for adaptation, a national mechanism must be established to ensure appropriate prioritization for urgent adaptation needs for the most vulnerable groups.
- **Leverage REDD+ and other PES schemes** emerging in Thailand to fund community-based climate resilient development.
- **Scale up private sector corporate social responsibility (CSR) funding** to support adaptation initiatives in community forests.



Capacity development

The Master Plan emphasizes the need for capacity building, awareness-raising and scientific research to ensure all sectors and stakeholders are capable of coping with the impacts of climate change. Most research has focused on understanding potential impacts, vulnerabilities and sensitivities, yet there is generally little knowledge on possible adaptation measures, especially for community forest-based adaptation in the Thai context. Therefore, knowledge sharing between local communities, academics and policy makers is critical at this stage.⁵² Researchers, practitioners, planners and community representatives should be brought together to share experiences on training activities, demonstration projects and the implementation of policies 'on the ground.'

Research

The Thailand Research Fund was established to help develop capacity of the Thai research community and promote the dissemination and use of research findings. The Thailand Research Fund has played an important role in creating a network of climate change experts in Thailand as well as influencing public policy on climate change issues.⁵³ Thailand's research networks have been strong contributors to the S.E. Asia Global Change System for Analysis, Research and Training (SEA-START), a program that supports multidisciplinary research on the interactions between humans and the environment. Researchers and findings from international scientific networks like SEA-START should play an increased role in climate policy development at the international level.

Training and networking

Understanding of climate change adaptation among government officials is low at both the national and local levels. Capacity development needs vary across Ministries. For MONRE additional technical expertise development is needed on the understanding of climate change impacts relevant for community forest-based adaptation. For the Ministry of Interior, more general adaptation training skills are needed for coordination of on-the-ground project implementation across a range of sectors.⁵⁴

RFD has a capacity development program, in cooperation with NGOs, to provide training and knowledge sharing on climate change adaptation for government officials from a range of national level Ministries and Departments. These are "training of trainers" sessions that give officials tools and skills for follow up disseminating of information at the local government level.⁵⁵ Additional capacity development for local government officials are critical given the ongoing decentralization process, in which oversight budgeting responsibilities are increasingly being placed at the sub-district level.

An important step to bringing together expertise from different Ministries was the creation of the Climate Change Knowledge Management Center, a collaborative effort between the National Science and Technology Development Agency (NSTDA) and Chulalongkorn University. The Center has a mission to synthesize and disseminate knowledge on climate change to support strategic planning of government agencies (the private sector as well as local communities) to strengthen climate coping capacity.⁵⁶ The Regional Climate Change Adaptation Knowledge Platform in Asia, hosted by AIT and funded by UNEP, is also being implemented in

⁵². Personal Communication, Chanyuth Tapa (2012).

⁵³. Adaptation Knowledge Platform (2010). *Scoping Assessment for National Implementation in Thailand*.

⁵⁴. Personal Communication, Chanyuth Tapa (2012).

⁵⁵. Personal Communication, Rattaphon Pitaktepsombat (2012).

⁵⁶. Adaptation Knowledge Platform, (2010). *Scoping Assessment for National Implementation in Thailand*.

Thailand with a major focus on ensuring that marginalized groups (migrants, minorities, women and children) are empowered to participate in the development of climate change adaptation strategies. The national Climate Change Knowledge Management Center would benefit from increased engagement with Adaptation Knowledge Platform to glean regional lessons.

Recommendations for capacity development

- **Ensure full implementation of Master Plan capacity development and awareness-raising programs.**
- **Assess, refine and scale up RFD's "training of trainers" for government officials**, as there remains capacity gaps at the district and TAO levels on strategic adaptive planning and integration of climate change adaptation in budgeting processes.
- **Develop grassroots capacity development efforts on adaptation as part of community forestry development process.** The use of a "local resource person" trained in climate adaptation in community forest groups (as used by FECOFUN in Nepal) would facilitate community forest vulnerability assessments and adaptation planning at the local level. Grassroots capacity development efforts should target the most vulnerable sectors of the population, including stateless, indigenous, landless communities and women, paying particular attention to communities who may not be able to actively voice their concerns.
- **Focus academic and research climate change institutions towards to local level adaptation concerns and related policy development.** Building off Thailand's growing climate change research centers such as the Climate Impact Science and Technology Center and regional networks such as SEA-START, there is opportunity to apply scientific data in adaptation strategy planning. However, climate models and best practices identified must be mainstreamed with flexibility and openness to local knowledge of climate and forest contexts.
- **Leverage community forestry networks** to share community-based adaptation practices among diverse stakeholder groups of government officials, local people, NGOs and academic institutions. Sharing experiences in trainings and pilot activities may help to develop a common understanding and bridge polarities between these groups. The Climate Change Knowledge Management Center may play a coordinating role in sharing knowledge across sectors.
- **Integrate climate change impacts and adaptation options into REDD+ trainings**



Thailand's community forest and adaptation roadmap to 2020

This roadmap provides time-bound recommendations for policies and planning, legal frameworks, project development, financing and capacity building in the immediate present, 2015 and 2020 for Thailand.

Thailand	Immediately	2015	2020
Policies and planning	<ul style="list-style-type: none"> Develop guidelines on community forest-based adaptation and distribute widely amongst government agency and community forestry groups Encourage RFD and Department of National Parks to work together with Tambon Administration Organizations (TAOs) and community forestry groups to undertake vulnerability assessments and create forest management plans that include climate change adaptation strategies. 	<ul style="list-style-type: none"> By 2015 RFD, Department of National Parks and Department of Marine and Coastal Resources have developed clear strategies on Community Forestry and climate change adaptation. Once the master plan is finalized strategies for community forestry-based adaptation are mainstreamed into the national policy development process. 	<ul style="list-style-type: none"> A cross-ministry agency is established to coordinate relevant government officials, research institutes and NGOs working on adaptation and the flow of information between the grassroots and national levels. Supporting community forestry based adaptation is explicitly within the mandate of this agency.
Legal reform	<ul style="list-style-type: none"> Continue efforts to streamline the passage of a revised Community Forestry Bill. Scale up participatory and integrated land-use mapping to clarify boundaries between community forests and protected areas 	<ul style="list-style-type: none"> Renewed efforts are made to pass a Community Forestry Bill with attention paid to integrated land use, ensuring it won't hinder community climate change adaptation objectives and allowing provisions for agricultural production amongst forest communities. The status of communities existing within national park boundaries and options for land use are clarified 	<ul style="list-style-type: none"> Next steps in 2020 dependent on status of community forestry legislation in 2015.

Thailand	Immediately	2015	2020
Project development	<ul style="list-style-type: none"> RFD and national NGOs establish community forest adaptation demonstration sites in upland areas, drawing from lessons learned across diverse projects. 	<ul style="list-style-type: none"> By 2015 a strong learning and coordination network between Community-Forestry adaptation projects is established. Adaptation objectives are integrated into the REDD+ planning process, requiring thorough project vulnerability assessments. 	<ul style="list-style-type: none"> Climate adaptation vulnerability assessment and planning mainstreamed across all Community Forestry project across Thailand. A well balanced portfolio of inland and coastal Community Forestry adaptation projects is in place across the country.
Public funding and private investment	<ul style="list-style-type: none"> Allocate community adaptation funds to community forestry groups and TAOs both for emergency needs such as forest fires, flooding and landslides and for long term adaptation planning against slow onset events (e.g. changing seasonal patterns). Scale up private sector corporate social responsibility (CSR) funding to support adaptation initiatives in community forests. 	<ul style="list-style-type: none"> In line with the Climate Change Master Plan, financial mechanisms are built to support the creation of local level and community forest-based climate change adaptation plans. Micro-credit, loans and insurance schemes are implemented to help Community Forestry groups strengthen climate adaptation measures. 	<ul style="list-style-type: none"> A publically funded national Community Forestry foundation is established (possibly funded through tax levies), with funding streams for climate adaptation.
Capacity development	<ul style="list-style-type: none"> Enhanced research on local climate impacts and vulnerabilities, building on the ongoing climate risk and hotspot assessment by MONRE. Identify and incorporate local knowledge on climate change adaptation and resilience strategies into capacity development programs and training curricula. 	<ul style="list-style-type: none"> In line with the Climate Change Master Plan, international assistance is accessed and scaled up in order to train local government staff for community-based adaptation vulnerability assessments as well as how to integrate adaptation into community forestry management plans. 	<ul style="list-style-type: none"> By 2020, there are local resource persons, fully trained in climate change adaptation planning, accessible for every community forestry group in Thailand.



