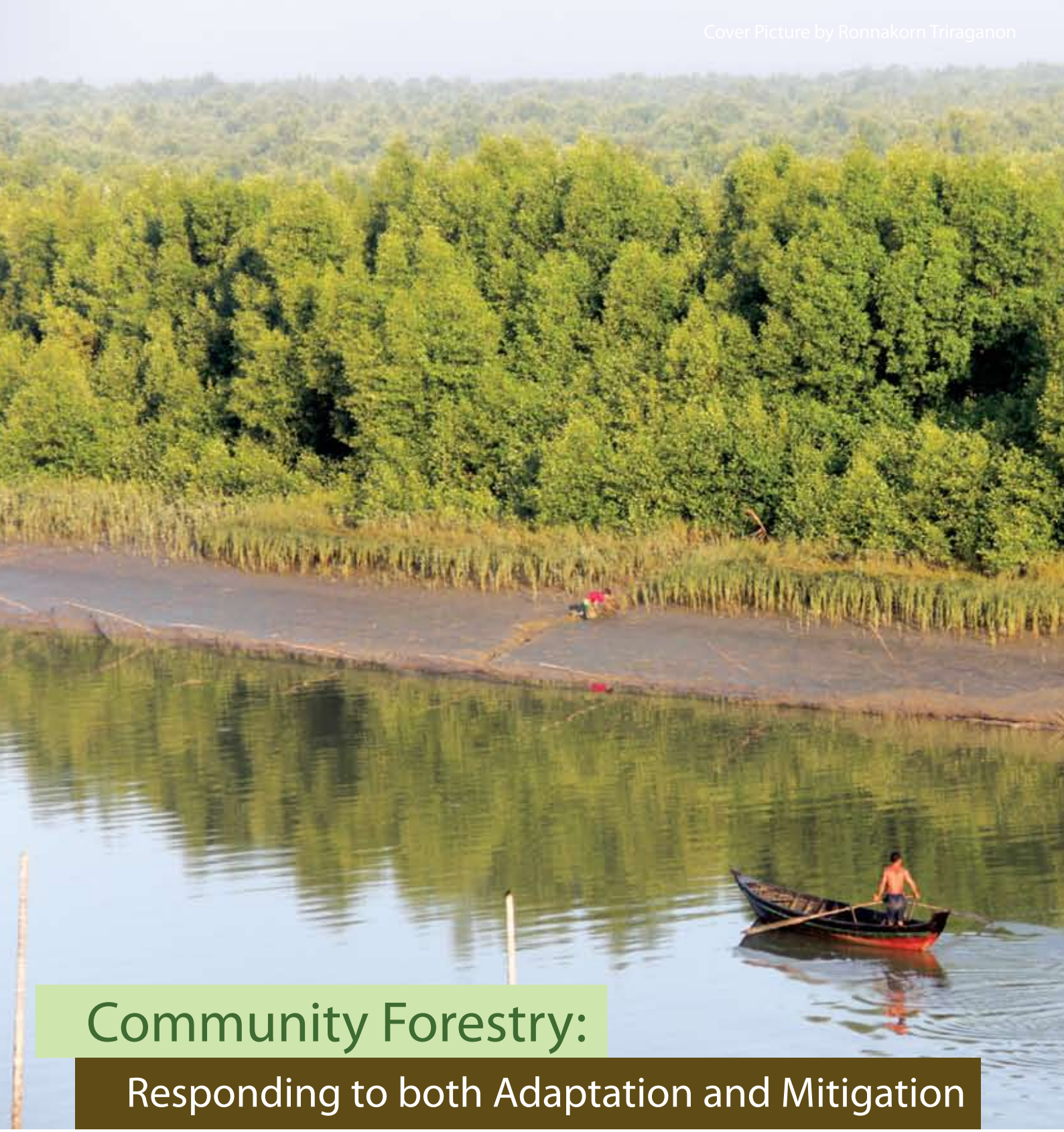

Cover Picture by Ronnakorn Triraganon

Community Forestry:

Responding to both Adaptation and Mitigation

Community forestry can and does play an important role in mitigation and adaptation to climate change. Until now, however, the ways it does so have received limited attention. Five community forestry sites across Asia were explored with a view to better understanding this relationship. Specifically, how can mitigation initiatives such as REDD+ enhance synergies with adaptation and how can trade-offs be avoided?

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Many countries in the region are developing or revising their national adaptation strategies and it is critical that forest use by communities be considered and included within these plans. At the same time, mitigation activities such as REDD+ have rarely explicitly considered adaptation or the need to develop adaptive capacity (FAO, 2012). This means that valuable opportunities are being missed to 'couple up' activities with a goal to achieving results in both areas.

> *Adaptive capacity is defined as "the ability of a system [human or natural] to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences" (IPCC, 2001).*

Research is increasingly showing the degree of contribution made by forests to the lives of rural communities. An ongoing, global study shows that on average, forests contribute one-fifth to one-quarter of household income in rural areas (Angelsen, 2011). It is necessary to better understand how local communities rely on forests, and how sustainable forest management strategies can support the resilience of local communities.

Failure to consider mitigation and adaptation in the context of forests and forest based communities may result in an undermining of sustainable forestry practices and a loss of rights and livelihoods among vulnerable communities.

Table 1: Case Study Sites and Contexts

Country	Context
Cambodia	A REDD+ pilot site located in the Seima Protection Forest, Mondulkiri Province, where indigenous communal land titles are in the process of being issued.
Indonesia	A protected area REDD + project site in Meru Betiri National Park where local communities have played a key role in managing buffer zone forestry sites.
Nepal	Explores the role of community forestry and its contributions to adaptive strategies in Sarlahi District of the Terai.
Thailand	Focuses on Ban Huay Win community, details community forestry in the context of a national park and the resulting ambiguities over rights with implications for adaptive capacity.
Vietnam	Da Loc commune in Vietnam represents an effort to respond to natural disasters, such as typhoons, through the reforestation of mangroves and the resulting impacts that this has had on local livelihoods and social dynamics.

Environmental and Climate Changes

While it is difficult to prove empirically that changes in the environment are due to climate change, many of these mirror climate change trends forecast for the region.

- water shortages and drought
- changing rainfall patterns, decreased overall number of rainy days, but greater intensity contributing to soil erosion, landslides and flooding
- temperature extremes, with hot days becoming hotter, and cold spells also more extreme
- changes in season onset by up to several months
- rising incidence of natural disasters linked to extreme weather events (i.e. typhoons)
- changes in type and range of human diseases such as malaria
- occurrences of new and unknown diseases in crops and livestock.

Impacts on Local Communities and Responses

Shifting seasonality and unpredictability of rainy seasons is adversely affecting both planting and harvesting of crops. In responses, communities are altering cultivation schedules and types of crops grown, often to less water-dependent varieties. As income drops due to reduced crop yields, communities are increasingly shifting from subsistence to cash crop production.

Water scarcity is experienced broadly and is leading to short-term coping strategies such as purchasing water for consumption and increasingly to inter- and intra-community conflicts.

Reliance on forests as a safety net in times of duress continues and while the impacts of climatic changes are less obvious than in the agriculture sector, they are increasingly being felt. The ranges of forest species are shifting and in some cases species are disappearing altogether. Local efforts to counter this include enhancing biodiversity and experimenting with less water-dependent species. However, declines in fruit trees, medicinal plants, and forest wildlife are impacting communities broadly.

Community Forestry Responding to Adaptation Needs

In addition to contributing to sequestering carbon, community forestry has strong potential to respond to recommendations in the Stern Review (2007) for strengthening adaptation in Asia. These include improving access to information about climate change, reducing the vulnerability of livelihoods, and empowering communities and other local stakeholders for active participation in decision-making processes.

In the community-managed mangrove forests of Da Loc Commune, Vietnam, the strengthening and diversification of livelihoods through aquaculture using mangroves has provided considerable new income. This is helping to compensate for declining agricultural yields and loss of land due to seawater incursion.

In Sarlahi District, Nepal, community forest user groups are one of the most important entry points for development service providers to offer a range of services including health, education, and micro-financing. They are important reservoirs of knowledge and social capital in addition to contributing to sustainable forest management.

Trade offs

In addition to the positive contributions made by community forestry, the case studies highlight potential trade-offs between community forestry and mitigation and adaptation objectives.

Communities rely heavily on key livelihood assets in times of stress, such as drought or natural disasters. Restrictions on forest product use may adversely affect the range of livelihood assets, such as fuelwood, income sources, food and fodder that rural communities rely upon. The case study of Nepal demonstrates that stringent restrictions on forest use such as grazing of livestock and collection of forest products such as medicinal plants disproportionately affect poorer segments of society and, in particular, women.

Conclusions

One of the main arguments for community forestry is that it is able to simultaneously respond to multiple objectives such as sustainable forest management as well as maintaining local livelihoods. Community forestry can support adaptation, but it does not inherently do so. Restrictions on forest use in favor of conservation or mitigation objectives can limit livelihood options and the design of decision-making and benefit-sharing arrangements can undermine vulnerable groups. It is therefore essential that community forestry be undertaken with a sustainable livelihoods approach that focuses on the strengthening of adaptive capacity.

Recommendations for Policy-makers

- Climate change adaptation needs to be mainstreamed within national and sub-national development planning. Community forestry is an example of effectiveness of decentralized local institutions in responding to environmental and climate changes.
- Forest-based climate change capacity building for local-level government is necessary. Part of this should be a common understanding of REDD+ and how it complements existing forestry structures.
- Clear and integrated national guidelines for REDD+ and community forestry should be created, including guidance on stakeholder rights, roles, responsibilities, and returns.
- Land tenure reform processes should be accelerated and expanded, with a particular emphasis on indigenous and communal land-titling processes as a means of securing long-term community commitment.
- Collaboration and coordination among government agencies horizontally and vertically needs to be fostered. This is particularly needed across different levels, such as district and provincial levels, and across relevant sectors.
- Good governance and transparency as well as concerted forestry law enforcement, especially on timber trafficking, is needed for sustainability and trust-building.
- Carbon rights and the benefits accruing from them needs to be addressed at national levels in order to ensure community support and the fair recognition of contributions.
- Policy-makers should identify models of successful mitigation–adaptation initiatives and scale up, where appropriate, prioritizing the documentation of lessons learned.

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