



Social forestry and climate change in Southeast Asia

CIFOR research findings and goals

Across Southeast Asia, 300 million people live in rural areas and up to 70 million people rely on forests for their livelihoods, nutrition and food security.¹ Against this setting, social forestry or community-based forestry has become an important feature of forest management in the region.

Covering 50% of Southeast Asia's land area, forests are crucial in mitigating climate change and enhancing communities' resilience to adverse events. As efforts to combat climate change get underway, social forestry practices are seen as one way of channeling incentive mechanisms such as REDD+ (**R**educing **E**missions from **D**eforestation and Forest **D**egradation **plus** enhancing forest carbon stocks).

Swidden agriculture is a type of social forestry that is often overlooked. In many Southeast Asian countries, it is typically seen as a driver of deforestation, and various policies are in place to convert the practice towards more intensive agricultural systems that are believed to be more productive.^{2,3} There is growing evidence however that swidden systems can maintain and enhance ecosystem services and belowground carbon stocks.^{4,5,6}

As part of the ASEAN-Swiss Partnership on Social Forestry and Climate Change (ASFCC), the Center for International Forestry Research (CIFOR) is undertaking research to better understand swidden systems and their relevance for REDD+ and livelihoods. CIFOR's research aims to understand how local knowledge, practices and social networks can be incorporated into the design of REDD+ projects to ensure that forest communities can participate meaningfully in and benefit from REDD+.

Key Points

Social forestry and swidden agriculture

Social forestry broadly refers to the management of forests by local communities to achieve various environmental, social and development goals, including climate change mitigation and adaptation, food security, nutrition and livelihood support.

Swidden agriculture is a form of agriculture that involves growing crops on small plots of land on a rotational basis. Swidden fallows are often woody and like forests, incorporate high levels of biodiversity and carbon, and help restore soils and other ecosystem services.^{4,6,7} Farmers using swidden techniques often also manage other forest plots of subsistence and commercial value.^{2,8}

Research sites

- Indonesia: Kapuas Hulu district, West Kalimantan
- Vietnam: Con Cuong district, Nghe An province and Moc Chau district, Son La province
- Laos: Vienthong district, Huaphan province

Research methods

- Social network analyses
- Land use and carbon stock analyses
- Livelihood assessments
- Policy network analyses of climate adaptation and mitigation

Capacity development

- More than 14 local government staff and 2 university lecturers trained in GIS and research methodologies
- Scholarships for two MSc students through a partnership with the National University of Laos
- Contributed towards completion of two Bachelor's and one Master's theses
- Social media training for 12 ASEAN social forestry officers and ASFCC partners
- Research carried out in collaboration with in-country researchers

1 Swidden communities are embedded in dynamic social networks

Even remote rural households and communities are embedded in multiple social networks that link people and places. REDD+ actors often overlook the ways in which communities exchange information and resources.

In the uplands of Laos where swidden remains widely practiced, gaps in understanding on REDD+ between national and local levels are prevalent, and further complicated by unclear operational mandates and objectives related to REDD+ among state institutions.⁹ In northern Vietnam, swidden communities maintain strong kinship ties but social organizations are seen as the most important ways of exchanging information and resources.

In Indonesia, information and resources flow through different networks in different contexts. For swidden activities in Kalimantan, customary and kinship networks dominate. For government-driven development activities, government actors play a central role but information largely flows through the village headman as gatekeeper and broker. With the emergence of REDD+ projects and the growth of commercial sectors such as oil palm production, network structures are moving beyond existing kinship and government networks, to include civil society organizations, environmental groups and businesses. It remains to be seen whether these new structures can democratize information flows.

The effectiveness of social networks in enabling information flows, the sharing of resources, and participation of local people in decisions around land and forest use are highly contextual – and it is important to consider how these local networks function, before creating new institutions for the design of REDD+ monitoring, reporting, verification and benefit-sharing systems.

Building on local community realities and knowledge is key to the efficient and effective design of a REDD+ architecture that responds to local needs.

2 Swidden farming contributes to sustainable landscapes and stable carbon stocks

In considering the broader landscape – going beyond small, plot-sized lenses under which swidden farming is often viewed – swidden systems reveal a rich and dynamic mosaic of forest and land use that enables flows of ecosystem services.^{10,11} CIFOR research in Indonesia, Laos and Vietnam reaffirms existing evidence that this mosaic of fallow lands is high in



biodiversity and that the overall carbon stock in swidden systems is far more stable than is usually assumed. However, this system is vulnerable in most places, to market- or policy-driven demands for agricultural intensification.^{12, 13}

When swidden farming is viewed as part of a broader landscape and over a longer time frame, it becomes clear that the forest-agriculture mosaics contribute to sustainable ecosystem services including substantial levels of biodiversity that are a source of resilient livelihoods.



3 Local communities can play an important role in REDD+ monitoring

Whilst many REDD+ projects aim to involve communities in forest management, very few project implementers incorporate local management and knowledge in monitoring activities. Fewer still build local patterns of resource management into their monitoring design. Yet local community members can play important roles in monitoring activities on the ground.¹⁴ Studies carried out in China, Indonesia, Laos and Vietnam have found that local communities can measure carbon competently and have significant knowledge of forest resources and management.

Building on existing local skills is essential for effective and efficient REDD+ that delivers co-benefits.



4 Climate change adaptation and mitigation policies remain separate

The management of diverse and dynamic forest fallow plots in swidden systems enables it to potentially support both climate mitigation and adaptation objectives. In assessing the broader context of climate change policies, the REDD+ policy arena highlights the importance of creating synergies between climate change mitigation and adaptation, but with little evidence in practice. In Indonesia and Vietnam, adaptation and mitigation strategies are institutionalized in different policy frameworks led by different policy actors and financed by separate funding streams.¹⁵ As interest grows in integrated economic development strategies such as the Green Economy or Low Carbon Emissions Development, the interlinkages between adaptation and mitigation will be crucial in realizing these strategies at both national and subnational levels.

Financial and policy incentives are required to realize climate mitigation and adaptation synergies. Signals are needed from the global REDD+ and development funding arenas.



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