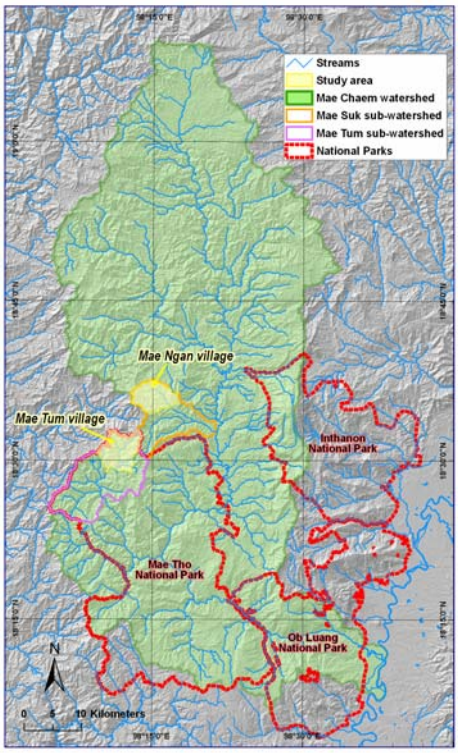
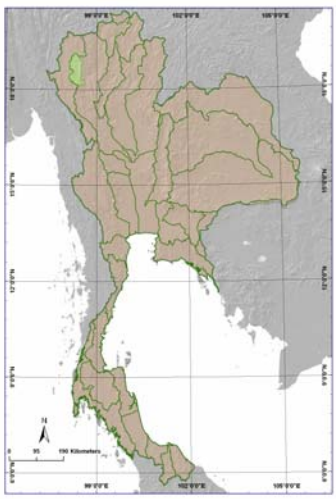
Rapid Agrobiodiversity Appraisal (RABA) in the Context of Environmental Service Rewards

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

Pornwilai Saipothong, Veronika Areskoug and Meine van Noordwijk
Correspondence: m.van-noordwijk@cgiar.org

Case Study: Forest agriculture mosaic in Mae Chaem (Thailand) 2005

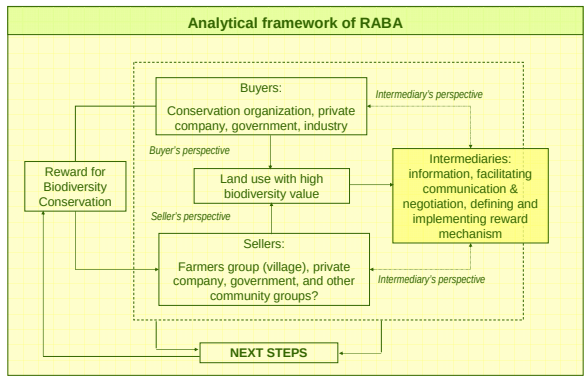




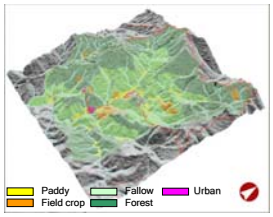
RABA was developed under the assumption that effective natural-resource management, including biodiversity conservation, can only be achieved if there is a synergy between three different types of capital: human, natural and social. Linkage between human and natural capital would result in good land use management, while synergy between natural and social capital would produce a solid institution for managing natural resources. The combination of all three provides the basis of evaluation for rewarding local agrobiodiversity conservation.
RABA sees the success of reward mechanism for environmental service as being conditional on four elements: Natural capital, human capital, and social bonding and social bridging capital.

VALUE	THREAT	OPPOTUNITY	TRUST
Natural capital	Human capital	Social-bonding capital	Social-bridging capital
Criteria and indicator	LU restriction	Spatial planning	Respect and Authority
ES criteria and indicators linked to rewards	Voluntary LU restriction agreements	Spatial planning: rule-based LU restrictions	Mutual respect shared objectives

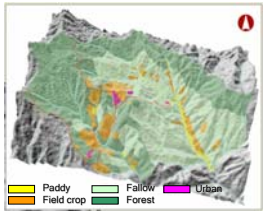
Analytical framework of RABA



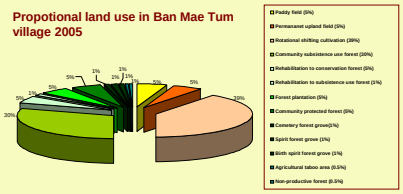
Land use in Ban Mae Tum

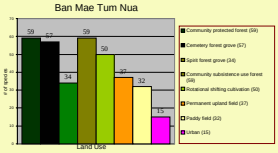


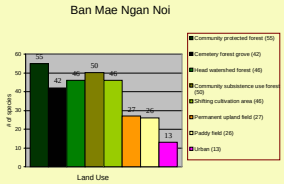
Land use in Ban Mae Ngan



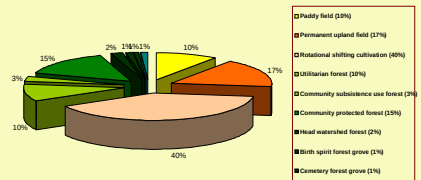
Propotional land use in Ban Mae Tum village 2005



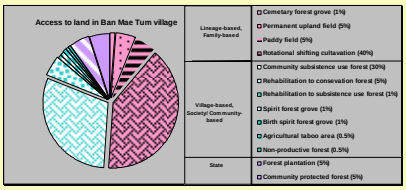


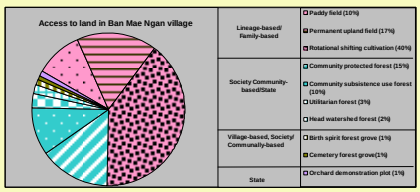


Propotional land use in Ban Mae Ngan village 2005



Land use species richness in the North Thailand case study area





Mae Chaem Watershed is in the mountainous north of Thailand. The area is a mosaic of forest and agriculture with many example of both traditional low-intensity shifting cultivation with long fallow periods and modern high-intensity agriculture with permanent fields.

- Initial results form GIS analysis indicate that there are more permanent field in Ban Mae Ngan and that there are more areas of shifting cultivation in Ban Mae Tum.
- There is a strong institution administering who can access the land and when, there is no strongly acknowledged rule in regard to administering hunting. Therefore, in the two villages, hunting activities have been one of the major threats to biodiversity.
- Limited land available for agricultural expansion has lately forced farmers to move onto Karen fallow areas. This move was also triggered by new economic pressures with increased outside influence.
- Despite being located outside of the Park boundaries, Ban Mae Ngan maintain considerably higher species richness than Ban Mae Tum.

From the rapid appraisal, the location of North Thailand has potential for an agrobiodiversity conservation initiative. The service to be advocated is the potential role as corridor to connect national park.

However, further research is needed to confirm that the land use and area could actually fulfill the function. There are some concerns about future challenges to engage in developing rewards for biodiversity conservation, namely, that trust is a bottleneck, traditional hunting, ethnic conflicts, hunting law and private land control for shifting cultivation.

Summary of SWOT analysis of North Thailand case study is as follow;

• Flagship mammal species under threat • Cultural valuing of species • Other taxonomic groups benefit as well ***Value***	• Awareness is high • Alternative livelihoods are available • Existing watershed network ***Opportunity***
Trust • Social bonding within village is high	***Threat*** • High local extinction rate • Official recognition of village inside National Park

Species richness and extinction rate in the study area