

## Losing less and winning more:

### Building capacity to go beyond the trade-offs between conservation and development in the Lower Mekong

Edited by Mai Hoang Yen and Terry C. H. Sunderland

#### Conservation and development trade-offs: losing less and winning more

Conservationists and development advocates are usually thought to work in opposition when it comes to forest management. Win-win situations, in which both conservation and development objectives are met, are the exception to the rule. People will continue to clear forests because they reap clear, immediate, material benefits, while those who want to safeguard the natural balance and planetary health see any encroachment as an undesirable compromise. Win-win scenarios continue to elude the many stakeholders in forestry, and therefore managing forests is best described as the negotiation of trade-offs between the forces of conservation and development.

To examine conservation and development trade-offs, as well as to explore the approaches and tools that could be applied to make these trade-offs more explicit and to plan for them, the Center for International Forestry Research (CIFOR) is implementing a three-year project (2006-09) in the lower Mekong River countries of Cambodia, Laos, and Vietnam. Our goal is to develop tools to better integrate conservation and development interventions that will help agencies to design and implement more efficient landscape-level projects. The research will be grounded in the successes and failures of past initiatives and will examine the trade-offs and synergies between livelihoods and conservation.

#### Our method

In the initial research phase, project scientists identified current best practices for designing and implementing integrated conservation and development projects (ICDPs). With these best practices in hand, they will evaluate the extent to which these standards have been achieved in ICDPs now underway in the lower Mekong region.

The best practices in design and implementation were identified through a broad review of the literature and an inventory of the multivariate techniques on a large set of variables. This research explored patterns among sites, project design, project activities and management. A complementary in-depth case study using qualitative methods was carried out in Cat Tien National Park, Vietnam, to understand which factors were likely to lead people to adopt and adhere to a Payment for Environmental Services (PES) scheme. The in-depth study will also inform the development of a locally appropriate PES for Cat Tien.

Best practices will then be disseminated through innovative approaches to media, public events and regional and global forums for conservation and development practitioners. To build capacity, namely by improving conservation project managers' skills and knowledge, three postgraduate students from Charles Darwin University is carrying out their research hand-in-hand with the in-country conservation managers, under the umbrella of this project.

### Our sites

The research takes place in three countries in the lower Mekong region: Cambodia, Laos and Vietnam (Figure 1). We are working in 15 conserved landscapes, five in each of the three countries. The site selection criteria included, a) at least a partial conservation focus on forests; b) the conserved area had to be larger than 10,000 hectares; c) one or more projects had to be managing the conserved area and associated buffer zones; and d) those projects had to have been active within the past five years (2003-07). Cases were selected based on the accessibility and feasibility of conducting fieldwork, the willingness of the project organizations to collaborate, and the availability of data.

One of the 15 sites, Cat Tien National Park in Vietnam was chosen to be part of a more in-depth study on what considerations to bring to bear when applying participatory approaches to the design of an effective PES scheme; such approaches are among the tools for integrating conservation and development.



Virachey National Park, Cambodia  
– Photo by: Luke Preece



**Figure 1.** The research sites are 15 forest conservation areas in the Lower Mekong

Simulation models, using the software program STELLA, will also be used to explore possible future scenarios for conservation in two sites: Cat Tien National Park in Vietnam and Seima Biodiversity Conservation Area in Cambodia. These scenarios will explore what benefits ICDP provides along with other approaches, including community-based conservation, protectionist strategies and PES.

### Selected conservation landscapes: Cambodia, Laos and Vietnam

- Cat Tien National Park, southern Vietnam
- Song Thanh Nature Reserve, central Vietnam
- Bach Ma National Park, central Vietnam
- Tam Dao National Park, northern Vietnam
- Van Ban Nature Reserve, northern Vietnam
- Seima Biodiversity Conservation Area, east Cambodia
- Central Cardamom Protected Forest, southwest Cambodia
- Monduliri Protected Forest, eastern Cambodia
- Phnom Samkos Wildlife Sanctuary, southwest Cambodia
- Virachey National Park, northeast Cambodia
- Dong Hoa Sao-Xe Pian Biodiversity Corridor, southern Laos
- Nakai-Nam Theun National Protected Area, eastern Laos
- Nam Kading National Protected Area, central Laos
- Nam Et-Phou Louey National Protected Area, northern Laos
- Bokeo Nature Reserve, northern Laos

## Our results

### Project design: best practices in integrated conservation and development project design in Cambodia, Laos and Vietnam

Based on the literature review and interviews, a set of 20 best practices (Box 1) was identified and then used to analyze project design.

Our study showed that, overall, projects in the region were integrating best practices into project design quite well. Projects were successful in defining their ultimate goal, allowing for natural resource use by local communities, acknowledging external threats, and ensuring policies were in place to support project intervention. Yet, projects infrequently acknowledged trade-offs or provided evidence that sustainable health and economic benefits to local communities had been adequately considered,

#### Box 1. Variables used for analysis

1. Clearly defined, measurable goals
2. Clarification of ultimate goal: conservation and/or development
3. Landscape scale
4. Acknowledging trade-offs
5. Clear sustainable economic or public health benefits to be gained
6. External threats
7. Working at multiple levels
8. Local threats and solution
9. Transdisciplinary planning
10. Policy to support intervention
11. Greater level of community involvement
12. Capacity building with local organizations and institutions
13. Recognize community heterogeneity
14. Clear understanding of local livelihoods
15. Permitted use of natural resources
16. Market access
17. Immigration
18. Adaptive management
19. Length of project
20. Monitoring and evaluation

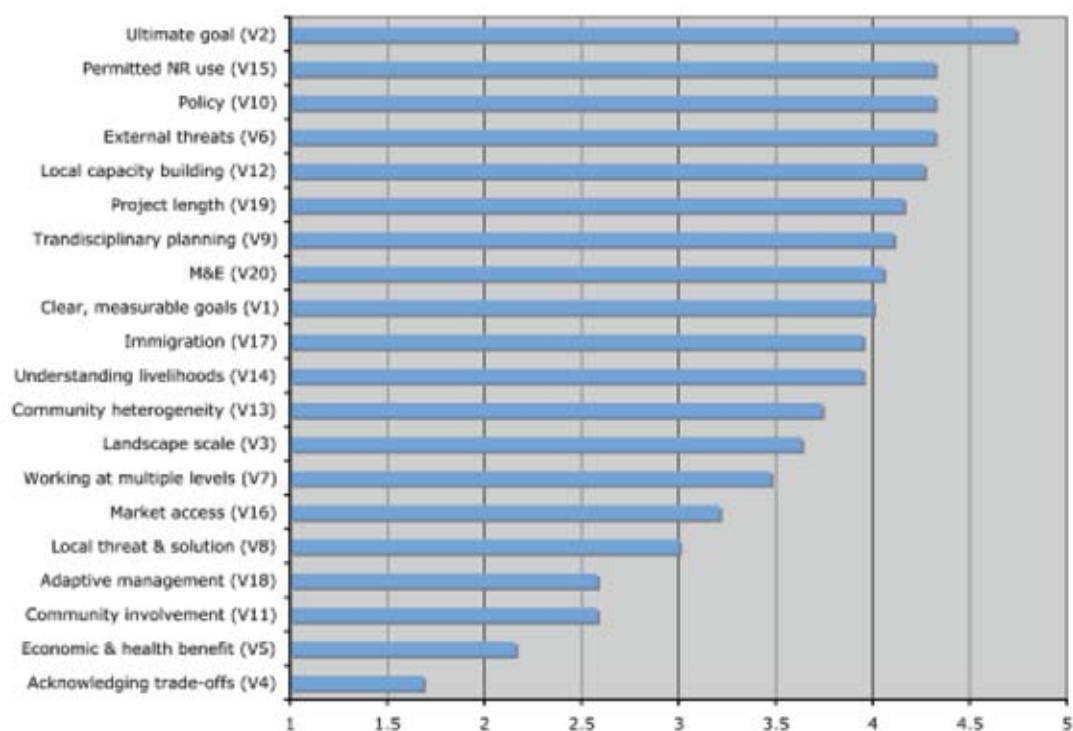


Figure 2. Mean variable score

and the use of adaptive management was rarely described. Landscape-scale projects that acknowledged external threats had a tendency to employ efficient monitoring and evaluation systems, yet fell behind in certain livelihood aspects of ICDP design. Trade-offs between conservation and development were primarily only discussed by the most recently implemented conservation projects (Figure 2).

**Message:** It is important that these “best practices” are acknowledged before initiating a new project, so as to better succeed in integrating conservation and development.

### Project implementation: strategies to negotiate between conservation and development in Cambodia, Laos and Vietnam

The primary goal of conservation organizations is to conserve biodiversity by reducing threats (Box 2). However, they must operate within a network of multiple stakeholders with diverse expectations. Hence, it is necessary to conduct integrated development programs that improve local livelihoods while also achieving conservation objectives and successfully negotiate with the relevant interest groups.

### Main activities of organizations

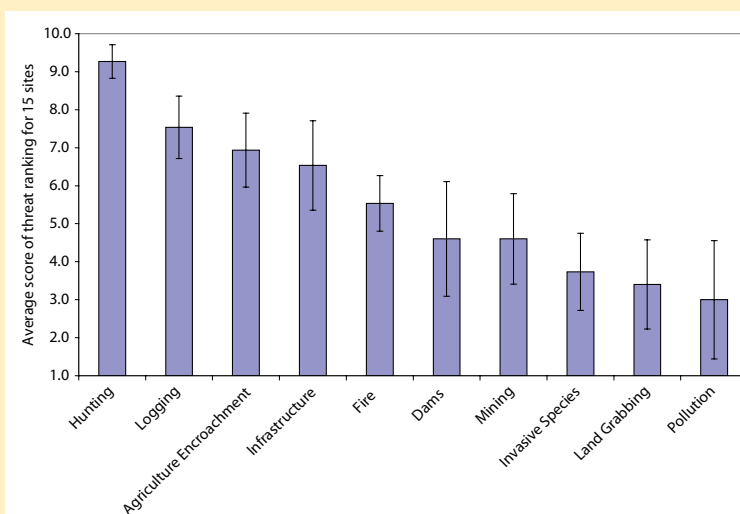
Organizations were found to be active in three main areas: Conservation (law enforcement, boundary demarcation and so forth); Local development (livelihoods, education, infrastructure development); and, Institution building (laws, regulations, land-use planning and technical capacity building) (Box 3).

### Project focus

Our preliminary results suggest projects focused specifically on conservation or development tend to have greater success in achieving their outcomes than integrated projects (Figure 4). Focusing on one activity is shown to improve progress (a strategy of specialization). As some partially integrated projects focus less on conservation, progress toward conservation goals decreases; similarly, as these projects focus more on conservation, progress toward development goals decreases. Development progress, however, is the same for development-oriented projects and ICDPs. The activities of specialized conservation or development projects are less varied than those conducting both conservation and development. Such integrated projects tend to conduct many activities at once and hence focus on a wider spectrum of project outcomes.

#### Box 2. Main threats to biodiversity across 15 research sites

Hunting was ranked as the highest threat across the 15 research sites, followed by logging, agricultural encroachment, infrastructure development and fire. Mining and dams were less important but ranked high in some areas, especially some sites in Cambodia and Laos. Country-specific threats ranked lowest: pollution and invasive species were an issue in Vietnam, and land grabbing was mainly an issue only in Cambodia (Figure 3).



**Figure 3.** Average score for ranked threats to biodiversity at the 15 sites, with standard deviation. Score based on a 1-10 scale: 1 = lowest priority; 10 = highest priority



### Box 3. Site-level project strategies to tackle threats to biodiversity

**Conservation** is primarily aimed at controlling forest resource exploitation such as hunting, logging, agricultural encroachment and non-timber forest product collection. Some organizations working at the research sites are solely conservation focused, conducting activities such as law enforcement training, environmental- and species-focused conservation and monitoring.

**Local development** includes education (primarily environmental education and awareness-raising), health support, infrastructure development, improving local livelihoods by providing alternative income-generating activities, and training to improve agricultural practices and resource management.

**Institution building** is represented in the variables by land-use planning and institutional development. Programs are often focused on developing national and local regulations for controlling trade in wildlife and wood, land-use planning and acquiring tenure rights for local people (also with an aim to reduce land-grabbing), and building up the technical capacity of government officials.

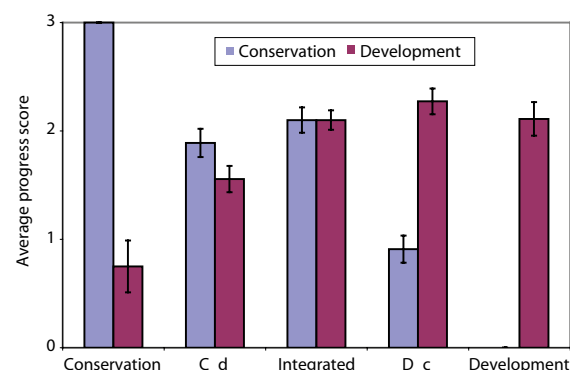
### Trade-off activities

Project strategies in the lower Mekong tend to trade off between conservation and development. If projects are implementing typical development activities such as infrastructure upgrades, local economic incentives or education, they are less likely to conduct research, law enforcement or other direct conservation activities. Nevertheless, conservation and development are intrinsically linked because what an organization does for conservation also affects local livelihoods and vice-versa.

### Project progress to achieving outcomes

The progress of the major projects included in our research depends on issues relating to management and negotiation. Government agencies are the main management authorities at the 15 sites, often in partnership with international organizations who often provide technical and

financial assistance. Fourteen of the 15 site-level conservation projects collaborate with other non-government organizations. Management is a combination of reporting, operational mechanisms, and monitoring and evaluation. Negotiation variables include participation by local people, collaboration with other organizations and consultation with diverse stakeholders.



**Figure 4.** Perceived progress of the biodiversity conservation and livelihood development objectives in projects focused on conservation or development, or a combination of the two

**Message:** Conservation and development organizations are doing relatively well in achieving their respective missions, but less progress is made when they have to combine the conservation and development objectives, as organizations must spread themselves much wider and conduct many activities concurrently. In order to successfully integrate conservation and development at the landscape scale, processes need to include a negotiation mechanism that uses participation, collaboration and consultation to draw on the relative expertise, or specialty, of the relevant stakeholders.

### Listening to locals on prospects for PES: a case study in Vietnam on how and what local aspects should be considered when designing a pro-poor PES scheme

PES is considered to be a potential tool that could help to provide incentives for conservation. In recent years, the PES concept has generated much enthusiasm and has been presented as an alternative to 'command and control' approaches to natural resource management. While considered a possible alternative to indirect approaches such

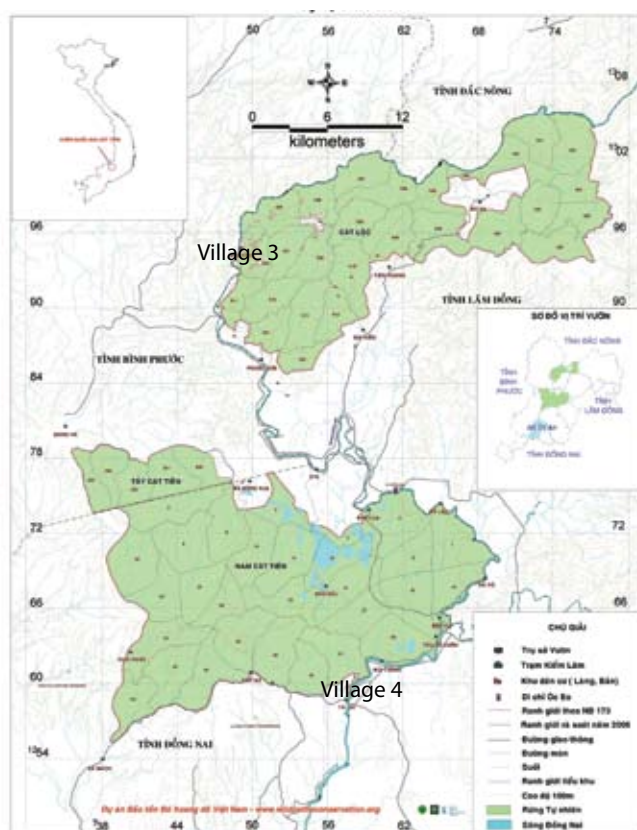
as ICDPs, many researchers and policy makers anticipate that such schemes will be only one tool among many employed in achieving conservation and development outcomes.

Meaningful participation is a key criterium for improving the chances of successfully integrating conservation and development. Excluding poor communities from the design of integrated schemes, including PES, might result in ineffectiveness or failure.

Participatory action research was carried out in Cat Tien National Park,



Nam Et-Phou Louey National Protected Area, Laos –  
Photo by: Terry Sunderland

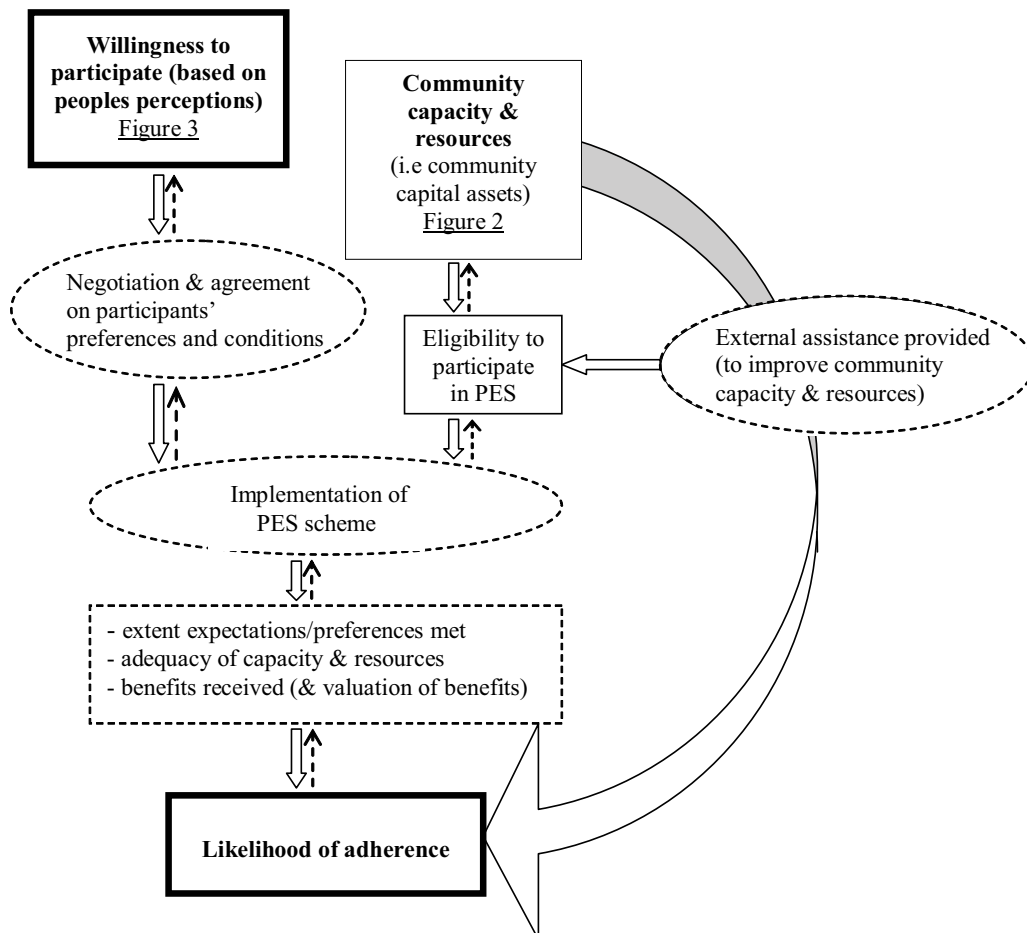


**Figure 5.** Map of Cat Tien National Park and location of the two studied villages (Source: Cat Tien National Park)

where the implementation of PES schemes is being considered. The research focused on a buffer zone village and a core zone village (Figure 5), to answer the question of how and what local community aspects should be considered when designing a pro-poor PES scheme. Views and information gathered from potential ES providers in the villages could be valuable to agencies considering PES schemes in Cat Tien National Park, and perhaps also other protected areas.

The collection and analysis of the Cat Tien study results were guided by a combination of three frameworks: (i) the local people's ability to participate in PES (including community capacity and resources); (ii) their willingness to participate in a PES scheme; and, (iii) their likelihood of adhering to a PES scheme<sup>1</sup> (Box 4). The design of an effective PES

1 The first framework is drawn from the Sustainable Livelihoods Framework - Carney 1998 (Carney, D. (1998). Sustainable rural livelihoods: what contribution can we make?, DFID, London (1998)). Some aspects of the second framework are drawn from a theory of cognition developed by Leeuwis 2002 - (Leeuwis, C. (2002) Making explicit the social dimensions of cognition. In Leeuwis, C. and Pyburn, R. (eds) Wheelbarrows full of frogs. Social learning in rural resource management, Koninklijke Van Gorcum, Netherlands. 391-406)



**Figure 6.** Elements influencing potential providers' adherence to PES

scheme could be enhanced by analyzing results within these frameworks to identify inhibiting aspects that may need to be addressed, as well as enabling factors. This work would help to guide proponents of PES schemes by ensuring that project design incorporates processes and features likely to enhance the long-term adherence and hence sustainability of PES programs (Figure 6).

#### Recommendations:

- Negotiation before and during the implementation of PES needs to carefully explain the rewards and conditions, and clarify the expectations of buyers and sellers;

- Seek private companies or organizations as the buyers, rather than the government, to avoid the possibility that payments are seen as a form of welfare;
- Use external intermediaries with appropriate skills to assist in improving community capacity and resources;
- PES and ICDP approaches should be combined in pro-poor contexts, as the factors that hinder villagers in participating in PES schemes are generally the same as those prioritized in indirect approaches to development.

#### **Box 4.** Framework to understand the voice of the poor in PES

##### **Ability to participate in PES (capacity and resources of the community)**

Insight into the factors that may inhibit or enable PES participants in PES can be achieved by identifying six types of capital assets, drawn from the Sustainable Livelihoods Framework: natural (water quality and soil fertility); human (education and health); social (traditional institutions and trust); physical (housing and roads); cultural (spirituality, connections to nature, cultural identity); and, financial (access to credit, savings and cash inflows).

##### **Willingness to participate in a PES scheme**

Various underlying perceptions relating to a community's needs, desires and values may affect individuals' willingness to participate in a PES scheme. These perceptions can include the capacity and resources needed, the potential benefits, and participants' awareness of PES. Perceptions and awareness can, in turn, shape people's preferences and expectations – and thus their willingness to participate.

##### **Adherence to a PES scheme**

The likelihood of adherence is determined partly by the capacity and resources available in a community. However, adherence also depends heavily on the participants' perceptions, as described above. After being involved in a scheme, people's willingness to participate could wane or rise if the experience altered their initial perceptions.

Adherence to a PES scheme can also depend heavily on whether the design incorporates assistance to enhance community capacity or resources in areas identified as requiring support before the scheme commences.



Nam Et-Phou Louey  
National Protected  
Area, Laos  
– Photo by: Luke Preece



**Box 5.** Some considerations in designing a PES scheme in Cat Tien National Park

**Inhibiting factors** for implementing PES would be low levels of the following community attributes:

- community autonomy and independence;
- technical, literacy, numeracy and business/money management skills;
- empowerment;
- decision-making power;
- access to markets;
- financial capital;
- external networks;
- avenues for community representation;
- trust towards government officials and external groups;
- access to equipment and tools;
- perceived self-efficacy.

**Enabling factors** could include the community's desire for change; an openness to changing livelihood activities; connections to nature and an appreciation of the forest and wildlife; and, a positive work ethic.

**Local communities' conditions for participation in PES**

*Strong preference conditions*

- No resettlement to another area (particularly buffer zone village participants);
- People want to be active in generating livelihood income (not idle);
- Continued access to forest products for household use, to a limited degree;
- A PES scheme must be able to generate more income and jobs in the buffer zone village than are currently available via other livelihood activities.

*Medium preference conditions*

- Money should be given to a trusted person (selected by indigenous voting);
- As few groups and layers as possible should be involved;
- Stronger communication and transparency between communities and officials;
- Greater indigenous voice and decision-making power;
- Rewards should combine different incentives, such as money and rice; and,
- Rewards should be paid regularly.

**'Fishing' for efficiency**

People want to 'keep busy'; and if they have opportunities to be employed then they are less likely to have time (or financial need) to be involved in illegal forest activity.

**Message:** The findings highlight the importance of three main requirements in designing pro-poor PES schemes: 1) thorough scoping studies to understand the context and general perspectives of local providers; 2) an emphasis on qualitative research that draws on participatory and learning tools from social and rural development; and, 3) consideration of the potential for hybridized PES schemes, such as schemes that combine PES concepts with indirect approaches such as ICDPs.

### Way forward

A new generation of integrated conservation and development projects, using approaches variously termed as the 'landscape approach' and the 'ecosystem approach', are being implemented to address problems related to biodiversity conservation and livelihood improvement. However, considerable thought needs to go into project design and implementation, to be sure of achieving successful conservation and development outcomes. The evidence suggests that such projects should:

1. be implemented at multiple scales;
2. identify trade-offs, provide platforms for multi-stakeholder negotiations and use instruments such as payments for environmental services to create incentives for conservation;
3. pay greater attention to organizational and institutional aspects during implementation;
4. give greater weight to extra-sectoral and non-local drivers of change;
5. use adaptive management (=social learning approaches); and,
6. use mainstream participatory action approaches.

The combination, sequence, timing, form and quality of interventions at the various scales will be important in influencing outcomes.

CIFOR and our partners working on this theme are interested in exploring the circumstances in which conservation and development objectives in forested landscapes can be reconciled, particularly at the ecosystem or landscape level. Our research aims to identify win-win situations, the enabling circumstances around these situations, and how these might be replicated.

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Bach Ma National Park, Vietnam - Photo by: Luke Preece

## Partners and collaborators

Site name	Country	Project management	Technical assistance
Cat Tien National Park (CTNP)	Vietnam	CTNP Management Board	
Song Thanh Nature Reserve (STNR)	Vietnam	STNR Management Board	WWF Quang Nam
Bach Ma National Park (BMNP)	Vietnam	BMNP Management Board	
Tam Dao National Park (TDNP)	Vietnam	TDNP Management Board	GTZ
Van Ban Nature Reserve (VBNR)	Vietnam	VBNR Management Board	Fauna and Flora International
Seima Biodiversity Conservation Area (SBCA)	Cambodia	Forestry Administration	Wildlife Conservation Society
Central Cardamom Protected Forest (CCPF)	Cambodia	Forestry Administration	Conservation International
Mondulkiri Protected Forest (MPF)	Cambodia	Forestry Administration	WWF Cambodia
Phnom Samkos Wildlife Sanctuary (PSWS)	Cambodia	Ministry of Environment and PSWS Management Board	Fauna and Flora International
Virachey National Park (VNP)	Cambodia	Biodiversity and Protected Areas Management Project (BPAMP)	
Dong Hoa Sao-Xe Pian Biodiversity Corridor	Laos	WWF through the Asian Development Bank's Biodiversity Corridors Initiative (site name - BCI)	
Nakai-Nam Theun National Protected Area (NNT)	Laos	Nam Theun 2 Watershed Management and Protection Authority (WMPA)	
Nam Kading National Protected Area (NKD)	Laos	Department of Forestry	Wildlife Conservation Society
Nam Et-Phou Louey National Protected Area (NEPL)	Laos	Department of Forestry	Wildlife Conservation Society
Bokeo Nature Reserve (BOK)	Laos	Gibbon Experience	

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