



Integrating livelihoods and multiple biodiversity values in landscape mosaics

an initiative of the CIFOR-ICRAF Joint Biodiversity Platform

J-L. Pfund¹, P.K. Koponen¹, T.C.H. Sunderland¹, N. van Vliet², D.A. Slayback³

¹ CIFOR, Bogor, Indonesia

² CIFOR, Yaounde, Cameroon

³ NASA Goddard Space Flight Center, Greenbelt, Maryland, USA

Challenge

It is now widely agreed that integrated landscape management works best when land use and conservation planning embrace local priorities and knowledge. Nevertheless, many biodiversity conservation initiatives still use the conventional approach of segregating protected areas and biodiversity corridors from surrounding landscape (Pfund et al. 2006).

The **goal** of this CIFOR-ICRAF Biodiversity Platform initiative is to contribute to the integration of improved livelihoods of rural communities with biodiversity conservation in a set of tropical landscape mosaics of high biodiversity conservation value.

Objective

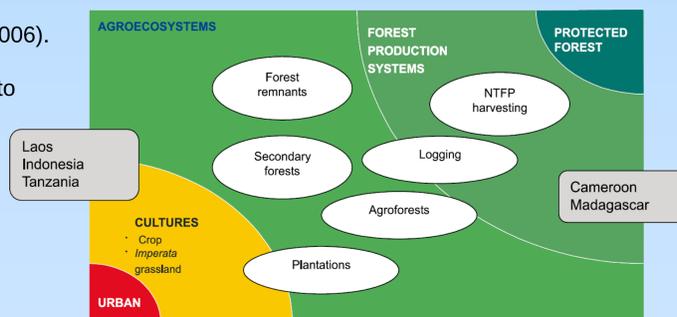
The overall objective of the project is to integrate sustainable livelihoods and biodiversity conservation objectives into land use planning processes in tropical landscape mosaics through appropriate approaches and instruments. Specific objectives include:

- To identify local needs and multiple biodiversity values, and integrate them into land use planning processes of selected tropical landscape mosaics.
- To develop participatory landscape planning and monitoring approaches that integrate both development and conservation objectives, and to promote their use by land use planners.
- To disseminate among relevant international actors lessons emerging from the selected landscapes and research-development best practices.

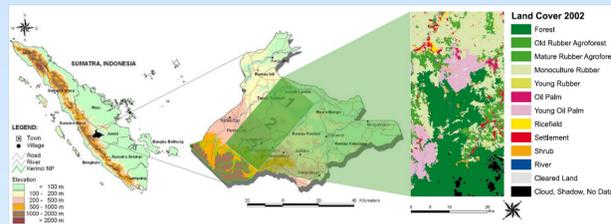
Approach

The study will examine the multifunctional landscape mosaics via four general research themes:

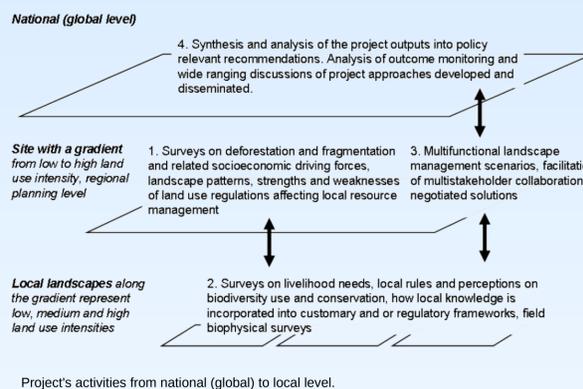
- **Biodiversity and Livelihoods** - Integration of scientific and traditional knowledge on the management of useful wild species and possible thresholds linked to their sustainable use.
- **Landscape Patterns** – Spatial patterns and relationships between local and external biodiversity values, resources, and multifunctionality.
- **Landscape governance** - Consideration and integration of local rules and governance into regulatory frameworks and support to collaboration and negotiation.
- **Rewards** for biodiversity conservation – Incentives and reward mechanisms for conservation services outside protected areas.



Project will operate in 5 sites where land use gradients range from protected forests to urban areas, with various land cover types and management activities inbetween (modified from the Matrix matters report, Cunningham et al. 2002).



Indonesia's Bungo district as an example: three local landscapes along the land use intensity gradient (mosaic of high (1), moderate (2) and low (3) land use intensity) will be sampled in each site.



References

Pfund J-L, O'Connor T, Koponen P and Bofa J-M (2006) Transdisciplinary research to promote biodiversity conservation and enhanced management of tropical landscape mosaics. Laforzeza (Ed) Patterns and processes in forest landscapes, consequences of human management. IUFRO Landscape ecology working party, Locorotondo, Bari, Italy.

Cunningham AB, Scherr SJ and McNeely JM (2002) Matrix Matters: Biodiversity Research for Rural Landscape Mosaics. Final Report. CIFOR and ICRAF.

For more information

http://www.cifor.cgiar.org/Research/ENV/Themes/Bio/biodiversity_platform.htm

Project Sites

- Eastern Tanzania: East Usambara Mountains
- South West Cameroon: Takamanda-Mone, SW Province
- Sumatra, Indonesia: Bungo District, Jambi Province
- Northern Laos: Vieng Kham, Luang Prabang Province
- Eastern Madagascar: Manompana corridor, Soanierana-Ivongo District

Spatial Design

The study will approach the themes from a range of spatial scales. The primary scale that will be used for the study is that of the **landscape**. The landscape is selected according to its conservation value and is delineated following a gradient of land uses, moving from dense forest to intensive agricultural areas. The initial landscape choice is based on analysis of satellite imagery and on the importance of landscape fragmentation, forest products, and poverty issues.

The study will also approach socioeconomic themes and issues related to the site at the **mesolevel** (corresponding to the “ecological” landscape level), taking into consideration governance structures and stakeholders at a district and regional level.

The **local territory** is a subset of the landscape that typically corresponds to a village.

Outcomes

The outcomes of the project are expected at local (outcome 1) and broader levels (outcomes 2 to 4):

1. Local populations and relevant stakeholders develop participatory landscape management options including: forest- and tree-based management interventions; institutional strengthening; policy recommendations; negotiation and incentive mechanisms that integrate livelihood needs and biodiversity conservation.
2. Land use planners and development and conservation agencies have a better understanding of livelihood needs and the status, trends and values of biodiversity in landscape mosaics. Land use planners are able to make better informed decisions for sustainable landscape management through the use of enhanced planning and monitoring approaches.
3. Policy makers and conservation and development practitioners consider and use recommendations on the integration of livelihoods and biodiversity appropriate to their situation.
4. The scientific community takes up lessons learned on transdisciplinary research-development activities at landscape scale.

