Swiss Programme for Research on Global Issues for Development

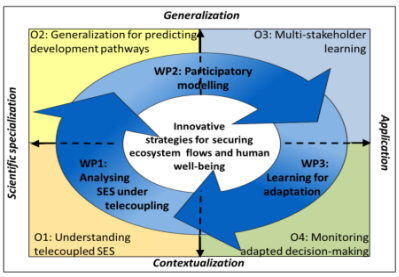
Telecoupled landscapes

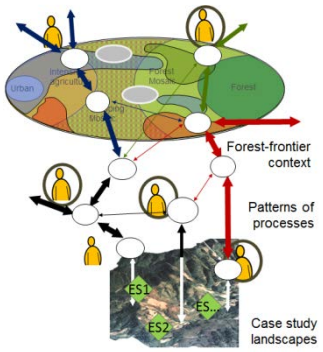
Managing telecoupled landscapes for the sustainable provision of ecosystem services and poverty alleviation

Landscapes on forest frontiers in the humid tropics provide powerful examples of the global community's attempt to reconcile human development with increasingly evident planetary boundaries. These social-ecological systems (SES) not only have to meet the immediate livelihood needs and the broader development aspirations of their local populations. They are also expected to ensure the complex mix of ecosystem service flows that support human well-being locally and provide environmental benefits worldwide. At the same time, global forces have come to outweigh local determinants of land use change in these landscapes. Driven by demands for agricultural expansion and intensification, fuel, carbon sequestration, biodiversity conservation, and more, these forces increasingly encompass combined socio-economic and environmental interactions between two or more distant SES ("telecoupling").

Research objectives

The overall objective of this research project is to devise and test innovative strategies and institutional arrangements for securing ecosystem service flows and human well-being in and between telecoupled landscapes.





Research Approach

This project will build on research partnerships in Laos, Myanmar, and Madagascar, and bridging scientific specialization with inter- and transdisciplinary collaboration and application.

WP1 will analyse how telecoupling influences land use decisions, and how these in turn modify the flows of ecosystem services and their impact on human well-being.

On that basis, WP2 will develop a generic Bayesian network model, which will be parameterized through participatory stakeholder interaction and result in a 3D collaborative virtual platform for understanding land use decision-making.

WP3 will translate these general insights into concrete innovations using a structured multi-stakeholder learning process.

Project team

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