



Tropentag, September 16-18, 2015, Berlin, Germany

“Management of land use systems for enhanced food security:
conflicts, controversies and resolutions”

Valuing the Impact of Rubber Agroforestry: An Integrative Ecosystem Service Assessment Framework

MARC COTTER, INGA HÄUSER, JOACHIM SAUERBORN

*University of Hohenheim, Institute of Plant Production and Agroecology in the Tropics and Subtropics,
Germany*

Abstract

With today's need of a project to meet inter-, multi- and trans-disciplinary standards as well as integrating stakeholder based decision making processes into a research framework, project management staff and project proposal writers face quite difficult tasks. Not only do the scientists need to meet their own disciplinary standards, but also it is expected that from the fruitful interdisciplinary interaction something bigger is born.

Within the SURUMER project we have established a working framework that allows for an integrative Ecosystem Service Assessment (ESA) aiming at bringing together both the needs of disciplinary data acquisition and high quality research with interdisciplinary modelling approaches under the umbrella of a stakeholder based steering mechanism.

A continuous stakeholder process focusing on three different groups of decision-makers (village heads and innovative farmers, regional planners as well as politics) in our project region develops key questions related to ESS to be addressed by the project scientists. Based on these questions, scenarios are designed in an iterative process during the stakeholder process. One of the major aspects of these scenarios is the integration of different management methods for various agroforestry-based intercropping approaches. These scenarios are analysed by multiple disciplinary and interdisciplinary modelling and assessment approaches, leading first to a bio-physical assessment of the scenario. This assessment is, in a second step, supplemented with socio-economic appraisals on expected changes in household income and economic welfare. Finally, these assessments are combined and adapted to be returned into the continuous stakeholder process for information exchange and possible adaption of key scenario questions.

For this Tropentag, the authors present the established framework as well as first results of the ESA. In addition, we want to share our experiences from the stakeholder integration processes and discuss possible adaptation strategies for other agroforestry systems and other (inter-) national settings.

Keywords: Ecosystem services, Greater Mekong Subregion, rubber