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Rubber Contra Biodiversity? An Analysis of the Adoption Processes of Selected Innovations in Xishuangbanna, Southwest-china

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Abstract

Xishuangbanna prefecture in Southwest China is one of the world's "biodiversity hotspots" and an array of various ethnical groups with different languages, cultural traditions and land-use systems. Currently, the region experiences tremendous changes, mainly through the introduction of new crop varieties, in particular hybrid paddy rice, tea bush plantations and most important: rubber. The aim of the study was to analyse the diffusion processes of those crop varieties in order to identify relevant driving and inhibiting forces for the adoption of certain types of innovations. This allows predictions on the adoption likelihood of future innovations respectively essential requirements for future improvement of the existing systems.

Farmers decisions upon land use are quite complex. It is necessary to consider their perspective in order to be able to understand and to identify the relevant factors in their decision-making processes regarding land use changes. For this kind of survey, qualitative data collection approaches such as observation methods, narrative farmers' and open expert interviews were combined with semi-standardised household surveys.

The presentation will show the preliminary results of an in-depth analysis of exemplary adoption processes in selected villages and it will give a first overview on the identified relevant driving and inhibiting forces for the adoption and dissemination of more recent innovations within the formal and local knowledge system. In Xishuangbanna, a rubber-driven rural development leads to rapid socio-economic changes, but also to a fundamental cutback in biodiversity. Since rubber has become the driving engine for economic development in the area, nearly all suitable areas are already cleared and planted by rubber trees. Many households have given up their traditional farming systems and now rely completely on rubber. On the short run, it is hardly imaginable that any other cash crop may be able to compete with the pure economic performance of rubber production.

The question might not be on how to completely substitute rubber but rather on how to improve the existing rubber plantations towards a more sustainable production system in order to maintain the current status of biodiversity.

Keywords: Adoption, biodiversity, China, diffusion, force field analysis, innovations, knowledge systems, rubber, situational analysis, Xishuangbanna, Yunnan

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