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Traditional Rubber Agroforests in Amazonia — a Model for Sustainability and Forest Conservation in an Ancient Frontier Region

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Abstract

The agricultural use of Amazonian uplands is characterized by the dualism of small-scale slash-and-burn agriculture of small farmers and large-scale extensive pastures of large land owners. Recently, the highly mechanized cultivation of rice and soybean has also begun to expand into some regions. Neither of these land use systems generates much income for the rural population, while the extensive land use forms, especially cattle pastures, are a major cause of deforestation and global concern. In the search for land use options for small farmers that combine sustainability, profitability and forest conservation, scientists have focused on agroforestry and tree crop agriculture, but cases of wide-spread adoption of “improved” land use methods are still rare. In the lower Tapajós region of central Amazonia, in a priority area for biodiversity conservation where agricultural land use is intensifying rapidly, small farmers have developed a land use system that could serve as a model for the sustainable use of a tropical forest landscape. In a region where the Ford Motorcompany failed with its attempt to grow rubber in high-tech plantations in the 1920s to 40s, partly due to an endemic fungal disease, small farmers have long sown rubber seeds into their slash-and-burn plots and cultivated the trees successfully in a secondary forest environment. In contrast to their much better documented Indonesian equivalent, the “jungle rubber” systems, these Amazonian agroforests remain productive for many decades, and century-old trees may still be tapped. A farm survey on the right bank of the Tapajós river, carried out in 2001–2, documented for the first time the present distribution and management of this promising land use practice. The results, some of which will be presented in this contribution, showed not only its importance for the local communities, where the rubber tree is widely seen as “the only thing that has ever brought money” to the farmers, but also threats to its persistence and opportunities for improvements and perhaps for a south-south technology exchange between Amazonian and Indonesian rubber agroforesters.

Keywords: Agroforestry, Amazonia, forest conservation, rubber tree, sustainability