

Secondary forests and fallow vegetation in the Eastern Amazon region - a brief overview of the project approach

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The overall objectives of the project are to sustain or enhance the agricultural productivity in the Northeast of Pará state without impacting soil, water and air quality. The pressure by farmers on the natural resources and biodiversity of the study region should be reduced without endangering the livelihood and chances to improve the standard of living of the local small-holders. To meet these objectives management options to improve the local fallow system have been developed with a view to substitute the traditional slash-and-burn practice. These options are based on the findings of the preceding project phase which mainly dealt with the ecology of the fallow vegetation and its function in the land-use system of the small-holder.

The main emphasis of the current project phase is: (1) to replace the burning of the slashed fallow vegetation by a fire-free land preparation technology and (2) to improve the vitality of the fallow vegetation and in that way accelerate its biomass and nutrient accumulation. To eliminate burning, a tractor-propelled mobile bush chopper has been developed to convert the woody fallow vegetation into mulch. Vitality of the fallow vegetation was accomplished through enrichment with different fast growing leguminous trees. Flanking studies include the dynamics of water, nutrients and organic matter, vegetation studies, agronomic experiments as well as screenings of improved germplasm of maize, rice, beans and cassava, bred for low input conditions. Altogether, these efforts should contribute to develop ecologically sound land-use packages for small holders. Two partner projects on the socioeconomic conditions of the farming communities and the farmers decision making as well as on the integration of animals into the small holder farming system complete our contribution to the research in rural development in NE Pará.

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