Vegetation cover and land use systems in rural communities of the Ramal do Prata of Igarapé-Açu and Tauarí of Capanema, NE Amazonia, Brazil

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Accelerated population growth, the velocity and intensity of human activities such as clearing forest for pasture, agriculture and logging have played a prominent role in the occupation and land use in Amazonia. This has caused differentiated and accented changes in the vegetation and the environment of the region. In this context, the municipalities of Igarapé-Açu and Capanema, have had desorganized occupation of their landscapes and this requires an adaptation of uses to the demands of ecological sustainability. This study shows field information, related to the socio-cultural, environmental, agronomic and technological profiles of eight rural communities, which are representative of the Tauari (Capanema) and Prata (Igarapé-Açu) modules, as well as information from orbital images related to the dynamics of vegetation and land use, from two distinct periods. The field information was collected by means of questionaires applied to 20% of the properties that develop traditional production systems. Moreover, TM/Landsat images from 1985 and 1995 were submitted to supervisioned classification that was realized by the system for image treatment (SITIM), making the identification of primary vegetation "igapó" forest, floodplain forest (várzea) and small forest fragments possible; two classes of secondary vegetation (high fallow and low fallow or "capoeira"); and three classes of land use (tilled ground, intact pastures and degraded pastures). As results, the highest rates of forested areas were verified in the Tauari module, where 3 of the 4 communities had above 50% in stability. On the other hand, independent from the stage of succession, it was observed that secondary vegetation was that which was most prominent in the landscape of the two modules, principally in the Prata module. In this module the growth in areas of high "capoeira" was more expressive than in the Tauari module. In relation to land use, expansion in the areas of pasture and agriculture were observed. Traditional cultivation patterns predominate, with local differences. The main source of income comes from beans and cowpea in the Tauari module, while in the Prata module the cultivation of cassava is predominant. From the field data, for the technological aspects, mechanized practices have been adopted by 64% of the interviewees in the Tauari module, which were greater than the data for the Prata module, which showed a percentage of around 15 percent of those interviewed. Therefore the study reached its objectives, in the sense of providing inputs for actions of research aimed to support the development of areas where slashing and burning of primary and/or secondary vegetation is practiced by small-holder farmers.

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