Capitalisation and strengthening of scientific skills on methods for evaluating and developing agroforestry innovation in the humid tropics (Africa and Central America)

OBJECTIFS

Hosting postPhD for 12 months for the development of research on the dynamics of Agroforestry systems
Thematic School on Social sciences Methods applied to agroforestry
Two won projects EU 2008 FUNICTREE and ANR 2010 INTSEN& FIX
2 publications in reviews with impact factors
Missions reports. Research reports (1 produced by the School participants in French and in English + 1 produced by 2 teachers and 2 participants) +Oral feed-back to local stakeholders + evaluations + press release

RESULTATS

Research on agroforests in Africa
A combined agronomic and geographic approach has helped to explain forest agrosystem spatio-temporal dynamics in the agroforestry systems in Africa. The important expansion of cropping systems associating various perennial crops (coffee, kola, cocoa, fruit trees) and native spontaneous forest species – called “agroforests” can be considered as the renewing of an ecosystem dominated in the past by forest. During the same period of 25 years, the area of food crops on hills based on upland rice after slash and burn has increased slightly. In this case soil fertility decrease. On the contrary, agroforests provide environmental services such as maintaining biodiversity and soil fertility, and reducing runoff and erosion. Still, they could also jeopardize food security for rural societies by reducing annual food crop areas, especially in times of an increase in food prices. The challenge is to combine these various cropping systems at the village and farm scale
In order to reach both farmer and societal objectives in terms of sustainable development.
Research on link between agroforestry and environment
Our research aimed to identify the contradictions between the political emergency of the biodiversity conservation effort and local development needs. Conservationists in Madagascar focused their attention on the endemic baobab tree, Adansonia grandidieri. Malagasy conservationists believed the area’s protected status would benefit the local economy through eco-tourism. However, the conservation actions undertaken there display limited understanding of local dynamics and conflict with farmers’ needs. To protect the baobabs, the government has prohibited rice cultivation without providing compensation. We show that the multifunctional baobab tree is integrated into an agroforestry system and protected by farmers. Based on these results, we address the issue of how to combine conservation and local development objectives through the involvement of farmers and the recognition of local knowledge in tree management. We also demonstrate that an emergency approach to conservation is not conducive to a successfull integration of conservation and development.

PERSPECTIVES

1) An elearning on "Social Sciences Methods applied to Agroforestry" was elaborated built with funds of ’ UVED/CIRAD and IAMM based on 2009 Thematic School. A pilot version of two modules was tested. French version available in june 2011 (https://enquetes-cirad.iamm.fr/); English and Spanish version available in september 2011. Developments are scheduled: over the translations in English and Spanish, adaptations and creations; new case studies and construction of other modules This elearning could be used in particular as bases of methodological support in multidisciplinary projects and