

### **3.4. Detailed analysis of the drivers of land use change and land deprivation in the Peruvian Amazon**

#### **Objective**

?? Identify decision points driving local activities that affect positive and negative soil processes

#### **Methods**

A survey was conducted with the farming systems research (FSR) methodology. The methods used were deep semi-structured interviews and participatory observations. Crop budgets were also estimated.

#### **Results**

The survey was conducted in two areas: in one village in a more degraded area, and in another village in an area where primary forest still is accessible. Most farmers in both areas do not perceive erosion as a problem. However, land degradation and “tired” fields are commonly seen as urgent matters. Most farmers believe that little can be done about degraded land, and it is seen as an inevitable process through which the fields have to pass. The farmers are highly aware of the green manure effect of plant material left on the fields, and there has been a change of practice from burning the plant material as was done previously. Some farmers with medium-sized estates are experimenting with permanent agroforestry systems with coffee, cacao, and fruit trees.

In the village in the degraded areas, farmers have less land (1-5 ha), but with a wide range of crops grown for the market. In the village in the forested area, the farmers have more land per family (8-15 ha), but the market production is mainly focused on maize. Estimating crop budgets on the commonly promoted cash crops in the region (such as maize, cotton, and coffee) revealed very low net income, or that the farmers even experienced net losses. Other crops that produce little, but constantly, throughout the year, such as plantain and coriander, have a relatively better payoff.

The results suggest that local farming systems, based on intercropping and agroforestry, may be the most suitable agricultural system in terms of both agro-ecology and farm income. A difference in farming strategies between the two areas could partly be explained by market access. Another explanation might be that degraded land has forced farmers to look for other market options besides traditional cash crops. Nevertheless, most farmers take few explicit measures to prevent land degradation. One reason for this would be that it is not considered as an anthropogenic problem, but as a natural phenomenon.

The implication of the diagnostic outcomes is that the research will continue to explore erosion and land degradation from mainly a social perspective, focusing on perceptions and strategies in local soil management, and on how innovative farmers deal with the

positive and the negative soil processes in terms of local techniques, soil management knowledge, and learning processes. We will also continue to explore the economic dimension of the local farming, and compare soil fertility of the different farming systems.

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