Compensation scheme for upstream farmers in municipal protected area, Peru

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Short title: Compensation scheme for upstream farmers in municipal protected area, Peru

Key Message: Municipal water users agree to pay an additional charge on their water bill for financing upstream watershed protection which secures water quality and quantity.

Suggested citation: TEEBcase Compensation scheme for upstream farmers in municipal protected area, Peru, by Isabel Renner (2010), available at: TEEBweb.org.

Reviewer: Fernando León

What was the problem?

Moyobamba, a city with about 42.000 inhabitants located in northern Peru, depends on three micro-watersheds (Rumiyacu-Mishquiyacu and Almendra) for its water supply. These areas – especially rich in biodiversity- were, however, affected by land use change, with conversion of tropical rain forest to agricultural lands by poor families which had immigrated to the area.

This situation reduced the quality and quantity of drinking water available. This was felt by EPS Moyobamba, a public company responsible for the supply of water to the city. EPS Moyobamba was faced with rising production costs and the need to substantially restrict supply. At that time, no management plans for the upper and middle parts of the watersheds were in place.

Which ecosystem services were considered? And how?

It was in this scenario that in 2004, the main stakeholders, with advice from German Technical Cooperation-GTZ, started to dialogue and coordinate in order to identify necessary actions for sound watershed management and to explore additional funding sources for maintaining these watersheds. As a first milestone, the Moyobamba Municipality declared Rumiyacu-Mishquiyacu and Almendra as municipal conservation areas, aiming at conserving the watersheds and biodiversity in these areas.

It became clear that significant land use changes were needed for the conservation and regeneration of ecosystems in the watersheds. Several analyses confirmed this: costs and benefits associated with different land uses (ECOSAUT model); demand of water for irrigation and for households; costs of water treatment and hydrological modeling. In addition, data on socio-economic conditions and relationship between stakeholders was recorded and a survey on water users' willingness-to-pay (WTP) was conducted. According to this survey, 82% of interviewees were in favor of paying for watershed conservation (Nowack 2005).

How was this information used to change/inform local/regional policy?

Based on this information, which contributed to the comprehension of interests and needs of involved stakeholders, a payment/compensation scheme for ecosystem services was designed: Water users compensate upstream farmers for improving land management and conserving the forest which generates ecosystem services – particularly the provision of good quality water. A management committee was installed, a platform to connect the upper and lower watershed stakeholders and to facilitate participation of different stakeholders in decision making.

After extensive local consultations, in 2007, the population of Moyobamba approved during a public hearing an additional payment of ~0,33 USD/month per household in the water bill. The payments by the water users started from August 2009 onwards and are used to promote better land use practices in the areas upstream. Presently formal contracts with the farmers (service providers) are in negotiation and pilot testing phase (MINAM 2010, León & Renner 2010).

In addition, it is attempted to restore the forest coverage as well as to provide technical advice to the farm families, primarily, in agro-forestry systems with coffee crops and in live barriers for soil stabilization.

This local initiative was supported by the Ministry of Environment (MINAM) and the National Sanitation Services Superintendence (SUNASS). As a success factor to this process the high level of commitment from key stakeholders needs to be emphasized – government authorities in all levels as well as the civil society.

References:

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For ECOSAUT Model consult:

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