

La Aguada and the Siembra del Agua Project

Addressing social and environmental problems with payments for ecosystem services in Bolivia

La Aguada and the Siembra del Agua (Water Planting Water) Project in Bolivia were established by a rural development non-governmental organization, the Eastern Training Institute (ICO), in 1985. The project is designed to assist local, rural communities in acquiring potable water. These types of watershed projects are growing in popularity in Latin America due to various pressures on water resources.



What Is the Problem and Who Are the Players?

In La Aguada, the ICO assisted twenty-four households in the local water cooperative with fencing off critical riparian areas to prevent cattle from grazing close to the river. The cattle were causing severe degradation to the upstream area by consuming plant life, trampling seedlings, compacting soil, and contaminating the river. Among other consequences, this resulted in vegetative loss and, as a consequence, a loss of top-soil causing sedimentation of the stream. The land was owned by local cattle ranchers and some areas had been cultivated, requiring compensation to both parties in exchange for the lost access and use.

How much were the payments?

The twenty-four households of the local La Aguada water cooperative made a one time cash payment for conservation of the land in question, which resulted in better quality drinking water for the local and downstream communities. The water cooperative also negotiated a cash compensation of US\$700 to fence off thirty hectares of cultivated land. As compensation to the cattle ranchers for the loss of access to drinking water for the cattle, a stream-fed drinking trough was constructed outside the protected area for US\$200 which was contributed by ICO. This allowed the cooperative to enclose an additional thirty-three hectares near the headwaters. The protected land per household was 2.48 hectares, totaling sixty-three hectares of protected area.

The project design was based on the concept that less grazing by cattle at the river headwaters would ensure the maintenance of a more resilient vegetation cover, resulting in higher water filtration and increased water quality. ICO and the local community excluded cattle from the headwater region with the use of barbed wire fencing to prevent them from contaminating the water, compacting the soil, and consuming new growth vegetation. It is reported, anecdotally, that in thirty-one months, the water quality improved 38% in the La Aguada stream.

What were the results?

The success of the project made way for ICO to expand protection projects to fourteen other micro-watersheds, which have achieved varying levels of success. Reasons for this variation in project performance include the willingness for community members to cooperate, unclear ownership, reluctance to pay for something that has traditionally been free, and general mistrust. However, the example of La Aguada shows that these types of projects can be quite successful when implemented correctly.



For Additional Information:

- Robertson, N, and S Wunder, (2005). Fresh tracks in the forest: assessing incipient payments for environmental services initiatives in Bolivia. Bogor, Indonesia, CIFOR. xii, 137p. Available at: <http://www.cifor.cgiar.org/pes/publications/>

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