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Review: Supporting the negotiation of fair deals for watershed services

The value attributed to watershed services depends not only on scientific information about the effects of land use on water quality, quantity and timing of flows, but also on a complex set of socio-economic considerations that influences land use decisions and the trade-offs that stakeholders are willing to make. It is also dependent on the willingness of stakeholders to cooperate in new and uncertain endeavors.

These issues were the focus of a recent study on Socio-economic Opportunities from Upland Catchment Environmental Services, which set about to support a more effective process of negotiating PWS agreements. The study was carried out by a team of researchers at CLUWRR (The Centre for Land Use and Water Resources Research) – in collaboration with IIED, CINPE, ITCR, and WII (with support from DFID). The study examined the Costa Rican PES program, which is among the more comprehensive and better known initiatives, and which has resulted in the protection of over half a million hectares of land (1997-2005) – some of which was almost entirely deforested or under threat of conversion in the mid 1980s. The study compares the Costa Rican experience with that of the Bhoj wetlands in Madhya Pradesh, India. Study components included a review and analysis of stakeholder perceptions, beliefs and activities related to land and water, a livelihoods survey, and special methodologies for analyzing economics and negotiation.

In stated choice experiments, stakeholders were presented with scenarios that were likely to occur with different land use options. By voting for their preferences for various combinations of attributes, stakeholders made implicit trade-offs, revealing how they might respond in a real life situation. Deciding factors included: the amount of forest cover necessary to maintain, the level of payment offered, opportunity costs, and property size.

In Costa Rica, results confirm that the PES program primarily benefits large landowners who own over 10 hectares, and face low opportunity costs of keeping some land as forested area. The participation of small and medium farmers has been limited because payments are not sufficient to cover their opportunity costs, particularly when there is encroaching urbanization. There are also insufficient funds to meet demand, and limited understanding of the program due to the limited presence of program managers. Other key constraints are disputes over land ownership and high transaction costs. However, small landowners who do not own forested areas can now benefit from practicing agroforestry, which was recently added to the land uses eligible for payments. inclusion in the program. There are no direct benefits for those with no land.

At the Arenal site, and in comparison to pasture, the economic value of additional water from cloud forest land use, in comparison to pasture, for hydropower production is small because the facility has a large inter-annual reservoir and is therefore less dependent on dry season flows. Analysis for a smaller run-of-river reservoir also shows relatively small benefits from upland forestry for hydropower production. However, although this study only considered water, it should be kept in mind that this is not the only benefit provided by forests.

In the Bhoj wetland site, it is promising that farmers appear willing to convert to organic farming if they can overcome the institutional, informational and land certification constraints, and so may only need upfront costs. The importance of inclusive and iterative stakeholder dialogue has also

proven crucial in understanding the feasibility of any intervention and developing support across multiple government, business and downstream wetland water users.

Among the key lessons, is the experience that decisions over land use change are not only driven by cash but also by the provision of public goods (such as road improvements or releasing market access constraints) – a finding that is consistent with learning from other IIED partner projects (outlined in a forthcoming report on Fair Deals for Watershed Services). This suggests that the kind of participatory scenario analysis applied to understand these preferences can be very useful in guiding the design of an initiative.

The results also serve as a reminder that secure land rights are critical, that the program is not designed to help the landless and seasonal labourers (who are negatively affected if land is taken out of production), and that payment schemes may be undermined by a lack of trust. Although poverty, gender and food security goals tend to weaken the PES approach, there may be opportunities to reduce poverty or mitigate unintended consequences for the poor. According to Rob Hope (CLUWRR), even if PES schemes don't directly reduce poverty, they may play a valuable role in initiating dialogue on water allocation problems outside of existing regulatory domains, thus promoting stakeholder negotiations for rural development and improved environmental management. There are also useful lessons that can be learned from negotiations over water allocation, which should also be better integrated with the protection of watershed services.

References and further information

Negotiating Watershed Services – Centre for Land Use and Water Resources Research, project page:

http://www.cluwrr.ncl.ac.uk/research_projects/ongoing_research/prj_costa_rica.php

- Project Final Technical Report PDF (641.39Kb)
- Costa Rica – Forests, water and livelihoods policy brief (English) PDF (99.45Kb)
- Costa Rica – Forests, water and livelihoods policy brief (Spanish) PDF (75.85Kb)
- India – Incentives that work for farmers and wetlands policy brief PDF (133.87Kb)
- Landscape, memories and water (Costa Rica) PDF (526.91Kb)
- Livelihoods analysis (Costa Rica) PDF (595.02Kb)
- Stated Choice Methods (Costa Rica) PDF (327.9Kb)
- Bhoj wetland briefing note (India) PDF (119.66Kb)
- Bhoj scoping study (India) PDF (1.07MB)
- Designing a Choice Experiment (India) PDF (1.02MB)
- Incentives that work for farmers and wetlands (India) PDF (800.16Kb)
- Negotiating Watershed Services PDF (521.04Kb)
- Are the upland poor benefiting from reward mechanisms? PDF (30.39Kb)

Porras I., Neves N. and Miranda, M. 2006. Technical Trip Report: Active Learning from Costa Rica's payment for Environmental Services, 5-12 February, 2006
<http://www.iied.org/NR/forestry/projects/water.html>

Other new resources

Katoomba Group Conference, Making the Priceless Valuable: Jumpstarting Environmental Markets. Hosted by The Katoomba Group, Forest Trends and Ecotrust. Portland Oregon, June 7-9, 2006. [Daily coverage and related information.](#)

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