Flows
News on Payments for Watershed Services
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Review: Markets for watershed services - in context

Payment schemes for watershed services (PWS) often bear little resemblance to the best made plans and program designs on which they are based. For example, in the Mexican government's program of payments for environmental services (PES), a design team initially recommended the following actions by the government: setting water use fees at a level that would send a signal to beneficiaries regarding the value of the service, earmarking a percentage of these fees for payments to service providers, conducting a reverse auction as a basis for selecting service providers to receive payments, and targeting forested areas most at risk of being converted. In practice, however, according to a new working paper by Carlos Muñoz-Piña, there is little overlap between forest areas most at risk and those that meet other criteria.

Other areas of forest that are eligible for payment schemes include those in close proximity to a protected area, those located in priority mountain areas, in the recharge area of an overexploited aquifer, in a zone of water scarcity or high flood risk, in the land of an indigenous community, or upstream from potential buyers of services. Additional qualifying factors are forest type, and whether it is included in a watershed protection plan. The highest priority is given to the protection of cloud forests, for which higher payments are offered because they are thought to have a greater value for water supply. Approximately 3.4% of forested areas in Mexico are cloud forests, which constitute 6.6% of areas eligible for payments and 12% of areas that actually receive payments (Segura 2004; Muñoz-Piña, Guevara et al. 2005). Analysis has revealed that, in 2003, during the first year of the Mexican program, 11% of forests for which payments were made, were at high risk of conversion. This figure more than doubled in the second year to 28%.

Payments made under the program are at a fixed rate for a set period. Since the participation of landowners is voluntary, their willingness to do so indicates that the offered level of payment at least exceeds the opportunity cost of their current activities. An alternative approach would have been to use a system of reverse auctions (i.e. one in which contracts are awarded on the basis of the lowest price). This approach would have revealed more detail on landowners' costs and might have been more efficient but was rejected as impracticable. Attempts to focus the program on those areas of highest deforestation were politically unacceptable, because it appeared to reward those landholders who had already violated legal measures to prevent deforestation.

As in Costa Rica, the payments to Mexican landowners are for a limited period and are scheduled to end in 2008. The government argues that the payments are necessary to support a transition to sustainable forest use. The payments are also intended to support the future development of more direct market-based arrangements between providers and consumers of watershed services at a local level.

Other initial sources of conflict in Mexico were the Ministry of Finance (which opposed earmarking of funds due to inconsistencies with national fiscal policy), and the National Water Commission (because public funds were insufficient to cover infrastructure costs of conventional water supply). It was also politically difficult to increase water use charges to municipalities, given that the overexploitation of aquifers is primarily due to a failure to enforce limits on extraction by ranchers and agricultural users, who receive electricity subsidies to pump free water from the aquifers.

However, the program was ultimately accepted by all key stakeholders on account of the adequate political support generated by overlapping interests in environmental protection, poverty reduction, water supply and forest conservation. A key source of motivation for the initiative was political pressure for the transfer of funds from urban to rural areas, rather than demand for the watershed service. However, this consensus could change with increasing pressures on water supply and awareness of these pressures ahead.

This case study was presented at a recent workshop in Titisee Germany, organized by Sven Wunder of CIFOR, in which participants compared and reviewed several PES cases from both developed and developing countries and discussed design considerations and contextual issues that have a significant effect on implementation. Key among these are weak property rights and the asymmetric distribution of information, in which opportunity costs are unknown to buyers, and targets for service provision are unknown to sellers. Among the key questions raised at the workshop were: whether there is anything really new in PES schemes, how many of them differ from traditional agro-environmental subsidy schemes, and when are payments necessary and more appropriate than other conservation approaches.

It seems clear that payments can be an important tool when there are hard trade-offs between private landowners – for whom opportunity costs are high, and external environmental interests. However, *pure cases*, that meet the fundamental criteria of making payments conditional on a measurable output of services, remain elusive. Given the importance of context, and the daunting challenges presented by implementation of collaborative management approaches, this raises the question of whether the standard market model creates unrealistic expectations about what can be achieved or is sufficient as guidance for PWS program design. Achievements to date reinforce the need for gradual learning from experience, and an adaptive approach to management, which can provide a foundation for building trust and lead to increasing returns over time.

References and further information:

Comisión Nacional Forestal, Programa de pago por Servicios Ambientales Hidrológicos

Garduño, H. (2005). Lessons from Implementing Water Rights in Mexico (pdf) In: B. R. Bruns, C. Ringler and R. Meinzen-Dick, eds., Water Rights Reform: Lessons for Institutional Design. Washington, DC, International Food Policy Research Institute.

Marshall, Graham R. 2005. Economics for Collaborative Environmental Management: Renegotiating the Commons. Earthscan, London

Muñoz, C., A. Guevara, JM. Torres and J. Braña. 2005. Paying for the Hydrological Services of Mexico's Forests: analysis, negotiations and results (pdf) Working Paper, Instituto Nacional de Ecología, Mexico. Presented at workshop on "Payments for Environmental Services: Methods and Design in Developing and Developed Countries," Titisee, Germany, June 15-18 2005, sponsored by CIFOR and ZEF Bonn.

Segura, G. (2004). Presentation on Public Payments for Watershed Services in Mexico. Ecosystems for Sale in an Unequal World, Breakout Session 3 A of the Global Synthesis Workshop on Markets, business and the environment - Strengthening corporate social responsibility, law and policy, held at the IUCN World Conservation Forum, Bangkok, Thailand.

New resources

Claassen, M., Damon M., King N.A., Letsoalo A., Moila N., Ramoelo A and Visser A. 2005. The feasibility of developing payments for catchment protection nservices and improved livelihoods in South Africa. South African Working Paper Series, Paper 1, June 2005. CSIR/IIED/DFID Project Developing Markets for Watershed Protection Services and Improved Livelihoods in South Africa.

King, N. and Hattingh, H. 2005. The role of good governance in making payments for catchment protection services in South Africa. South African Working Paper Series, Paper 2, March 2005. .

CSIR/IIED/DFID Project Developing Markets for Watershed Protection Services and Improved Livelihoods in South Africa.

Robertson, N. and Wunder.S. 2005. Fresh Track in the Forest: Assessing Incipient Payments for Environmental Services Initiatives in Bolivia. CIFOR. Bogor Barat Indonesia.

Katoomba Group PES Assessments are available for Kenya, South Africa and Uganda

The Millennium Ecosystem Assessment technical volumes are now available online and can be ordered from Island Press.

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