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Review

Payments for watershed services - in theory and in practice

Payments for watershed services are becoming increasingly adopted as a strategy for both conservation and development. This is because of their potential to generate a sustained flow of funding that will also act as an economic incentive for engaging in appropriate land use practices. They are also regarded as potentially more equitable than regulatory approaches that have typically excluded local communities from access to resources that have traditionally supported their livelihoods without any form of compensation. However, past reviews have generally found that relatively little is known regarding their effectiveness and have identified numerous challenges being faced in their implementation. These include:

- Identifying willing buyers of watershed services,
- Identifying and implementing land management practices that ensure the service is provided, and
- Developing cost effective ways of linking buyers and suppliers of watershed services.

In other words, while elegant in theory, and most likely an improvement over less direct approaches, in practice they present a number of challenges and unanswered questions, which are critical to maintaining if not establishing buyer confidence and willingness-to-pay.

Over the last two years, there has been a greater effort to move payments for watershed services from theory to practice. There is also more effort to evaluate these initiatives as they are implemented, through "action learning" and "action-research" approaches. These are approaches designed to provide feedback needed to allow the concept of payments to be adopted for local conditions and to support learning by doing. Although more information is needed to identify the actual economic values of watershed services and thereby, to link payments to benefits, lessons learned from the implementation of longer-standing initiatives such as Costa Rica, have already led to adjustments needed to make them more equitable and inclusive. They have also led towards an emphasis on pilot initiatives at small scales, where land and water relationships can be better linked to management practices, and that make it possible to more directly engage stakeholders.

The Flows Bulletin will support and facilitate this process of learning, by reporting on lessons learned, providing an annotated guide to relevant literature, announcing new reports and events as well as providing a space for commentary and feedback from readers. The bulletin is being relaunched in conjunction with the completion of an Assessment Guide (listed below) that was developed to support the development and implementation of payments for watershed services. The guide focuses on identification and quantification of watershed services found in a specific context, and highlights *Rules-of-Thumb* that emerge from a review of research and case studies. These rules are only meant to provide a working hypothesis, and thereby serve as a point of

departure for the assessment of payment initiatives, from a hydrological perspective . Given the broad range of relevant knowledge and perspectives needed to consider the contribution of watershed processes to human well-being, in a specific social and economic context, the Flows Bulletin will supplement the guide by covering special topics in assessment as new information emerges, identify lessons learned from their implementation, and consider their implications for practice.

Specific topics that have been identified for coverage in upcoming issues include:

- Identifying and defining watershed services,
- The role of Cloud Forests in the provision of watershed services,
- Economic valuation of watershed services,
- Payments for watershed services and the "right to water,"
- Extreme climatic events as drivers of watershed processes and policies,
- Ecosystem services, livelihoods, and human security,
- Governance and participation in the implementation of payments for watershed services, and
- Integrated assessment of watershed services as an institutional challenge.

Feedback and Commentary

We welcome and appreciate immediate feedback on topics you would like to see covered in future bulletins. We also invite you to present lessons learned from your own practice, and *Rules-of-Thumb* that may have emerged from them. These may be presented as commentary and also compiled in a future bulletin.

Please submit feedback to feedback@flowsonline.net and comments to comments@flowsonline.net.

For further information

The above mentioned *Knowledge and Assessment Guide to Support the Development of Payment Arrangements for Watershed Ecosystem Services* was prepared by Sylvia S. Tognetti, Guillermo Mendoza, Bruce Aylward, Douglas Southgate, and Luis Garcia, for the World Bank Environment Department, with support from the Bank-Netherlands Watershed Partnership Program. It can be downloaded from Flowsonline.net in both English and Spanish.

IIED project on *Policy Learning in Action: Developing Markets for Watershed Protection Services and Improved Livelihoods*, - contains links to above mentioned diagnostic reports and to partner organizations.

The World Bank [Program on Payments for Ecological Services](#)

General reviews and reports on lessons learned:

LANDELL-MILLS, N. & PORRAS, I. T. (2002) *Silver bullet or fools' gold? A global review of*

markets for forest environmental services and their impact on the poor (pdf). International Institute for Environment and Development, London

PAGIOLA, S., BISHOP, J. & LANDELL-MILLS, N. (Eds.) Selling Forest Environmental Services: Market-based Mechanisms for Conservation and Development. London, Earthscan.

PÉREZ, C. J. (2003) Payment for hydrological services at a municipal level and its impact on rural development: the PASOLAC experience.(pdf) Payment Schemes for environmental services in watersheds, Arequipa, Peru, 9-12 June 2003

ROSA, H., KANDEL, S., DIMAS, L. & MÉNDEZ, W. C. F. N. C. A. E. (2003) Compensation for Environmental Services and Rural Communities: Lessons from the Americas and Key Issues for Strengthening Community Strategies. PRISMA, San Salvador (Spanish and English)

IIED Series of reports on Markets for Environmental Services

Announcements

New Resources:

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, 18-20 November 2004. Meeting summary and draft report.

The Ecosystem Marketplace - www.ecosystemmarketplace.com - a source of news and information on emerging environmental markets, was recently launched by the Forest Trends Katoomba Group, at the IUCN World Conservation Forum (report and summary)

Environmental Services and Land Use Change: Bridging the Gap between Policy and Research in Southeast Asia. Tomich, TP, van Noordwijk, M, and Thomas, DE eds. A special issue of Agriculture, Ecosystems and Environment, Vol. 104/1 (September, 2004). The introductory chapters by Tomich et al and van Noordwijk et al; the syntheses of smoke pollution by Byron, biodiversity functions by Swift et al, and hydrological functions by Bruijnzeel; and the concluding chapter by Tomich, Thomas and van Noordwijk are available as pdfs in the publications database on the ASB website. (An earlier version of the Bruijnzeel chapter also is available in Spanish on the ASB website.) Abstracts to the entire issue can be accessed at: www.sciencedirect.com

Payment Schemes for Environmental Services in Watersheds, Electronic Forum, held 12 April - 21 May 2004. Final report, proceedings and numerous reference documents (Most in spanish - the final report is provided in both Spanish and English). See also: ***Regional Forum on Payments for Environmental Services***, sponsored by the FAO Regional Office for Latin America and the Caribbean, held at the 3rd Latinamerican Congress on Watershed Management, held in Arequipa Perú, 9-12 June 2003. Final report (in both Spanish and English) and papers presented (most in Spanish only).

Several papers on watershed and other environmental services were presented at the Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP), ***The Commons in an Age of Global Transition: Challenges, Risks and Opportunities***, hosted by the Instituto de Investigaciones Sociales, Universidad Nacional Autónoma de México, in

Oaxaca, México, 9 – 13 August 2004. The site does not group papers by sessions in which they were presented. However, a theme report for the stream of papers presented on ***Environmental Services and Commons Management*** can be found at:

http://www.iascp2004.org.mx/download/tr_environmental_services.pdf, and all papers presented at the conference can be found at: <http://www.iascp2004.org.mx/indexeng.html>

Upcoming events:

Seminar on ***The role of ecosystems as water suppliers***. Sponsored by UNECE - the United Nations Economic Commission for Europe, Secretariat of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Geneva, 13-14 December 2004. Hosted by the Government of Switzerland. For further information and seminar documents see: <http://www.unece.org/env/water/meetings/ecosystem/seminar.htm>

About the Flows Bulletin

The Flows Bulletin is produced by Sylvia Tognetti, an independent consultant on environmental science and policy, with the collaboration and support of IIED project on Policy Learning in Action: Developing Markets for Watershed Protection Services and Improved Livelihoods, and the World Bank, through the Bank-Netherlands Watershed Partnership Program.

The Flows Bulletin is a forum for multiple perspectives, and does not necessarily represent the views of the sponsoring organizations.

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