Payments for Environmental Services: The Need for Redefinition?

Beria Leimona and Rudolf de Groot

Evolution of PES

As an alternative to the "command-and-control" approach, increasing enthusiasm for market-based instruments (MBI) in environmental management arose in the early 80s. It was hoped that MBI, including packaging taxes, effluent taxes and charges, capital or operation subsidies, tradable permits, deposit-refund schemes, performance bonds, liability instruments, and many others, would reduce the cost of achieving environmental goals and distribute resources in more efficient ways. The 1992 Rio Declaration on Environment and Development endorsed the use of MBIs as an important component of sustainable development.

The principles behind MBI attempt to capture the financial value of environmental services through so-called 'payments for environmental services' (PES). Four types of PES schemes can be distinguished and differentiated by the degree of government intervention in administration of the schemes, by characterising the buyers and sellers, and by the source of payments: (1) private payment schemes; (2) cap-and-trade schemes, under a regulatory cap or floor; (3) certification schemes for environmental goods; (4) public payment schemes, including fiscal mechanisms. Over the past decades, a range of payment mechanisms for environmental services have been operating in Latin American, the US and Europe.

In the early 2000s, the Payment for Environmental Services (PES) concept was tested as an efficient for solving environmental problems in Asian and African developing countries. Advocates of effectiveness and efficiency of the PES approach tend to see "environmental service transactions" in economic terms and generally prefer the term "payments" (Wunder 2005). However, the application of PES mechanisms should balance effectiveness and efficiency with fairness and pro-poor characteristics, with transaction costs as obstacles to both. Proponents of fairness and equity dimensions tend to prefer the use of the broader concept of 'rewards' (RES).[1]

Van Noordwijk et al (2006) mention four criteria with indicators in developing RES schemes. They should be realistic, voluntary, conditional and pro-poor. Very few active programmes strictly follow these criteria due to social, political and natural factors affecting transactions and the system in which they operate. Because of this, a list of sub-criteria is presented for quality control (van Noordwijk et al 2007) (Table 1).

Table 1: Key criteria and sub-criteria for effective, efficient, sustainable and equitable PES

Criteria	Sub-criteria
A. Effective, efficient and sustainable:	
- Realistic	✓ Shared common perspective of the issue
	✓ Value to beneficiaries is substantial
	✓ Opportunity costs can be covered and access to resources improved
	✓ Threats can be monitored and evaluated
- Voluntary	✓ Legitimacy at individual level
	✓ Free and prior consent applied
	✓ Adaptiveness of mechanism
- Conditional	✓ Trust is enhanced
	✓ Sanctions exist
	✓ Environmental change is taken into account
B. Equitable	
- Pro-poor	✓ Aligned with MDGs and sustainable development objectives
	✓ Rewards reduce vulnerabilities of the poor

The first three indicators capture 'market' and 'economic' aspects of the scheme related to the effectiveness, efficiency and sustainability of the RES institutions. A scheme is effective when the reward slightly exceeds the amount land managers are willing to accept to take actions in providing ES, but less than the willingness and ability of ES beneficiaries to pay. Special attention is given to the ecological basis of environmental service agreements: the mechanism should be based on real cause-effect relations between land use and environmental services to ensure its sustainability (van Noordwijk et al 2005; de Groot et al 2006).The last two indicators relate to the equity dimension of the schemes to understand the relations between poverty and ES provision and to develop pro-poor mechanisms.

The pro-poor nature of a RES scheme can be interpreted from either a design or a poverty impact perspective. RES strategies can be deliberately designed to be biased in favour of the poor when considering tradeoffs between the efficiency and fairness of the mechanisms employed. From a poverty impact perspective, a RES can be assessed by its contribution to poverty reduction through payments that actually reach poor land users or poor ES providers (Hope et al. 2005; Noordwijk et al. 2007).

Furthermore, a conditional RES must ensure transparency. In designing a RES, solving problems at local levels related to voluntary participation and conditionality can help make the whole process more effective. Beyond that, the roles of intermediaries and buyers are also very important in ensuring that the RES is realistic and pro-poor.

Some lessons from RES initiatives in Asia

An ICRAF study on RES initiatives in Asia showed that these schemes were quite heterogeneous in the types of poverty, landscape characteristics and environmental services provided (Leimona et al 2009[a]). The implementation of RES differed according to socio-cultural backgrounds in the study area, and in their models for involvement of local communities. ICRAF also assessed local people's perpective of factors influencing poverty in view of developing a RES payment approach.

One requisite of pro-poor RES design is to identify rewards that match with people's needs and expectations. From our analysis, we concluded that rewards in the forms of human capital, social capital and physical capital – or what are often

1 In this paper, we consistently use 'rewards for environmental services (RES)' for our concepts and findings and 'payment for environmental services (PES)' for other special cases focused on financial transactions.

referred to as non-financial incentives – are very often the most preferred and also the most feasible. This supports our proposition on how non-financial incentives can make important contributions to local livelihoods, which was especially clear in the case of conditional land tenure in one of our pilot sites.[2] Moreover, literature on collective action in natural resource management indicates that social capital of community members influences the magnitude of transaction costs. Higher levels of social cohesion and trust within the community and its external linkages are associated with lower transaction costs. This suggests that investments providing non-financial benefits to communities, such as strengthening social capital, can help reduce overall costs of RES implementation.

Another ICRAF study on the impact of PES highlights the need for awareness of the social dynamics between participants and non-participants and to design benefit packages that minimise jealousy and conflict (Leimona et al 2009[b]). The case studies reveal that the role of the intermediary is very important and dominant in any PES scheme in developing countries, mostly because of the limited capability of the ES providers for managing direct payments. Honest and trusted intermediaries are therefore one of the key factors of success. Furthermore, the role of government as regulator should be more pronounced and explicit. Indeed, the PES concept was new to all relevant stakeholders, including government and buyers, which created a challenge in gaining their commitment.

In conclusion, the application of payments for environmental services in developing countries has experienced shifting perspectives, from legitimating cost-efficient and effective natural resource management to concerns about equity and fairness of the scheme. Practitioners in this field have experienced that markets alone cannot solve the problems of environmental services degradation. The effective functioning of PES mechanisms requires redefinition of its rules, government regulation and better enforcement.

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Beria Leimona (l.beria@cgiar.org) is working at ICRAF SouthEast Asia, Indonesia. Rudolf de Groot (Dolf.deGroot@wur.nl) is based at Wageningen University, the Netherlands.

Addressing Equity and Poverty Concerns in Payments for Environmental Services

Michael Kollmair and Golam Rasul

Introduction
The success of achieving the social goals of Payments for Environmental Services (PES) programmes, i.e. reduction of poverty, depends directly on the equitable distribution of benefits to poor mountain communities, who are the primary custodians and managers of environmental services. Although PES programmes are not designed for poverty reduction, they can create substantial synergies when programme design is well thought through. Recent literature indicates that in general PES programmes are not very sensitive to equity issues and are governed in such a way that may even exacerbate existing inequalities and trigger social tensions (Karr 2002; Miranda et al. 2003). It is therefore important to investigate the governance and equity aspects of PES, which are critical for sustainable development and environmental conservation (WCED 1987).

Equity in PES can be understood from three perspectives: equity in access, equity in decision-making and equity in outcome (Corbera et al. 2007). Equity in access refers to the governance mechanism which determines an individual participant's access to environmental resources, including land and forest. Equity in decision-making refers to the procedural fairness of the PES framework, which ensures that all sections of the community have an equal voice in decision making processes. Equity in outcomes refers to the distribution of cash and in-kind benefits across participants. In view of this, this paper briefly examines the challenges of governance mechanisms of PES in relation to poverty and equity.

2 http://www.worldagroforestrycentre.org/Sea/Networks/RUPES/download/SiteProfiles/RUPES-Sumberjaya_FINAL.pdf