

12 Payment for Environmental Services: Interactions with Property Rights and Collective Action

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Abstract: Global climate change and environmental degradation highlight the need for institutions of sustainability. In particular, there is increased interest in the potential of payments for environmental services (PES) to improve incentives for sustainable land management. Although smallholder land users can be efficient producers of environmental services of value to larger communities and societies, experience shows that the international and national institutions that govern PES are often designed in ways that entail transaction costs that cannot be feasibly met by individual smallholders. This chapter presents a conceptual framework to examine the inter-linkages between property rights, collective action, payment for environmental services, and the welfare of smallholder land users, examining how these play out in the contexts of carbon sequestration, biodiversity, and watershed functions. Greater consideration of the linkages between PES and other rural institutions can lead to more equitable outcomes, particularly by (1) suggesting how collective action can be used to overcome transaction costs and barriers to participation by smallholders and (2) identifying mechanisms through which managers of small private parcels or areas of common property can be rewarded for environmental stewardship through PES.

Keywords: Biodiversity, Carbon sequestration, Collective action, Payment for environmental services, Property rights

12.1 Introduction

Prof. Konrad Hagedorn's work on "institutions of sustainability" is gaining increasing relevance as global climate change and environmental degradation highlight the need for sustainable management of natural resources. As the limitations of command and control regulatory approaches to many environmental problems

become apparent, there is growing attention being paid to other institutional mechanisms to protect or enhance the delivery of environmental services. In particular, a range of payments for environmental services (PES) are being explored to match the demand for services with the incentives of land users whose actions modify the supply of those environmental services. A range of such programs have been set up for carbon sequestration, biodiversity conservation, and watershed functions. But while there has been considerable attention given to the formal institutional mechanisms for PES programs themselves, there has been relatively less interest shown in understanding the interrelationships between PES and other rural institutions. In this paper we present a conceptual framework to examine how the function and welfare effects of PES depend on the institutions of collective action and property rights. We then examine how these play out in the contexts of carbon sequestration, biodiversity, and watershed functions, with particular emphasis on the involvement of poor smallholders in developing countries.

There is considerable academic and policy enthusiasm for PES programs as potential “win-win” arrangements for the farmers or other land managers and others who benefit from such services. The potential benefits of market-based approaches often referred to include improved resource conservation, more sustainable sources of conservation financing, greater environmental justice in the distribution of conservation benefits and costs, and new and sustainable sources of income for resource-dependent communities. Because the majority of the world’s poor are smallholder farmers, there is further interest in the potential of such programs to reduce poverty and create sustainable livelihoods. Smallholder land users can be efficient producers of environmental services of value to larger communities and societies; consequently, the European Union, Japan, and the United States have set up numerous payment schemes that supplement farm incomes while improving incentives for smallholders to increase the supply of these services (Engel, Pagiola, & Wunder, 2008). But experience in developing countries reveals that the international and national institutions that govern PES are often designed in ways that entail transaction costs or other restrictions that cannot be feasibly met by individual smallholders.

PES include a range of voluntary transactions in which farmers or other land managers are rewarded – directly or indirectly – for practices that will continue or increase the provision of environmental services.¹ The practical and theoretical case for PES in developing countries is laid out in several recent works (see Engel et al., 2008; FAO, 2007; Landell-Mills & Porras, 2002; Pagiola, Arcenas, & Platais, 2005). Van Noordwijk, Chandler, and Tomich (2004) discuss the conceptual basis of rewards for environmental services from various perspectives, concluding that a location-specific blending of rights, obligations and rewards is needed as long as the essential “preconditions” for market-based payments are not met in large parts of the developing world.

¹ This definition is consistent with FAO 2007, which is somewhat broader than the definition followed by Wunder, Engel, and Pagiola, (2008).