Chapter 17
From Principles to Numbers: Approaches in Implementing Payments for Environmental Services (PES) in the Philippines

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Abstract This paper proposes a way to classify PES projects based on how environmental service payments are justified and determined. Using the IPCC[1] approach as a model, we recommend the use of the tier system to classify PES projects. The three tiers are summarized below:

- Tier 1: Payments based on established ecological principles and local knowledge
- Tier 2: In addition to the above, payments based on simulation modeling and limited site information
- Tier 3: In addition to above, payments based on site-specific quantitative measurements of environmental services

We illustrate this with case studies from existing PES projects in the Philippines. We then presented a decision tree to determine how the tier system can be used.

Keywords Payments for environmental services (PES), tier approach

17.1 Introduction

There is a lot of interest in PES schemes around the world (Landell-Mills and Porras 2002). An environmental service payment or reward refers to *compensation for service, merit or effort, and/or incentive for maintaining or enhancing*

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[1] Intergovernmental Panel on Climate Change.

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environmental service functions, received by the sellers or paid by the buyers of the environmental service(s) (Van Noordwijk 2005). Compensation and incentives can be economic, social and moral. Economic incentives may be made in terms of direct payments, financial incentives, or in kind. Rewards and payments in kind may include the provision of infrastructure, market preference, planting materials, health and educational services, skills training, technical assistance or other material benefits. In addition to indirect and direct monetary payments, rewards can take the form of land tenure security (which may be considered an economic incentive). Social and moral incentives and rewards may address non-material aspects of poverty including recognition and respect in the community, and personal satisfaction for doing something, which is currently considered beneficial to the society now or in the future.

The Philippines has a severely degraded natural resources capital base which has adversely affected the environmental services they provide. In the early 1900s, it was estimated that 70 percent of the country was covered with 21 million hectares of forests (Garrity et al. 1993). However, at present only about six million hectares of forests remain (FMB 2004). Thus, in the last century alone, the Philippines lost almost 15 million hectares of tropical forests.

Since the early 1970s, when extensive reforestation efforts began in the Philippines, various incentives schemes have been devised and implemented to encourage people to plant trees on private and public land. However, after more than three decades of support, reforestation in the Philippines has largely been ineffective and inefficient (Garrity et al. 1993; Chokkalingam et al. 2006), partly because the incentives provided were either inappropriate or did not consider the long-term nature of reforestation. On public forest lands for instance, the 25-year renewable CSC instrument of land tenure is not a sufficient incentive to invest in long-term forestry and environmental protection (Garrity et al. 1993). Moreover, resource-use rights are transferred just partially. Short-term contracts and direct payments to farmers were not able to draw a genuine interest in tree planting either.

Partly in response to the limited success of government-initiated programs, a number of local governments, research organizations and NGOs in the Philippines are testing various PES schemes as a way of reversing environmental degradation. The environmental services being compensated in existing projects include water resources (i.e., RUPES Bakun), carbon sequestration (Lasco et al. 2005), seascape and landscape beauty, and biodiversity (Padilla et al. 2005). Smallholder tree farmers are the intended beneficiaries of most of these efforts. For example, carbon sequestration projects under development for the Kyoto and voluntary markets in the country are targeted for small holder tree farmers.

However, the sustainability and long-term success of PES mechanisms is limited by various institutional, social, political and operational factors, and several issues remain, such as quantification and attribution of ES, which require rigorous technical work to achieve technical accuracy. In addition, the design of payment schemes is marred by complex social issues – all these affect the speed and timeless of implementation of PES mechanisms. In trying to address these issues, we propose a way to classify PES projects based on how environmental service payments are