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Monitoring and evaluation of Payment for Forest Environmental Services in Vietnam: From myth to reality

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ABSTRACT

Payments for Ecosystem Services schemes, or PES, offer a useful approach to account for the largely unrecognized value of ecosystem services provided by the forestry sector. However, the actual impacts of PES schemes, both in effectively protecting the environmental quality of an ecosystem, such as the water filtration capacity of a forest, and on improving local livelihoods, often remain unknown. Policy evaluation in general, and for newly established policies in particular, plays a critical role in providing essential feedback about what is actually happening on the ground. Thus, for PES to generate outcomes that are effective, efficient and equitable, policy makers must develop a functional evaluation system. As PES schemes around the world face similar problems in monitoring and evaluation, we draw on the case of Vietnam-the first country in Asia to introduce a nationwide PES scheme-and analyze the effectiveness of the monitoring and evaluation activities of the Payment for Forest Environmental Services program (PFES). We also offer practical policy recommendations for future PFES implementation. We find that monitoring and evaluation of PFES in Vietnam is still in its infancy. Although there is a strong accounting of revenues generated from ecosystem services buyers, there is a discernible lack of ability to assess the quantity and quality of ecosystem services being enhanced by the program; fulfillment of contractual obligations; the appropriateness of financial flows; or socio-economic impacts of the program. We argue that a functioning PES evaluation system must include an accessible grievance mechanism to ensure transparency and accountability in the distribution of PES revenues from central to local levels.

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1. Introduction

Payments for Ecosystem Services (e.g. Wunder, 2015, 2005; Muradian et al., 2010; Vatn, 2014), or PES, has been judged a useful policy instrument for influencing land-use decisions (Daniels et al., 2010; Kemkes et al., 2010). According to Wunder (2015), PES can be defined as (1) voluntary transactions; (2) between service users; (3) and service providers; (4) that are conditional on agreed rules of natural resource management; (5) for generating offsite

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http://dx.doi.org/10.1016/j.ecoser.2015.10.016 2212-0416/© 2015 Elsevier B.V. All rights reserved. services. Redford and Adams (2009: 785) also highlighted that "PES is being adopted [at the national and local level] with rapid speed, and often without much critical discussion, across the spectrum of conservation policy and debate and developing a life of its own independent of its promulgators." Hundreds of PES schemes are in place around the world but it remains unclear whether they are actually having any impact on the maintenance and improvement of ecosystem services (Schomers and Matzdorf, 2013; Farley et al., 2010). For these reasons, the task of critically understanding the risks and opportunities associated with PES is both urgent and significant. Although numerous global studies have consolidated both the key lessons learned and pitfalls associated with PES policies and programs (Pagiola et al., 2005; Pham et al., 2009; van Noordwijk et al., 2012), there is a marked lack of evidence-based case studies that can demonstrate whether PES is







having positive impacts on ecosystem services (ES) and local livelihoods (Daniels et al., 2010; Kemkes et al., 2010; van Noordwijk et al., 2012). However, policy evaluation in general, and for newly established policies in particular, plays a critical role in providing essential feedback about what is actually happening on the ground (Trochim, 2009). In particular, monitoring is an essential element of PES design and implementation (Sommerville et al., 2011). Monitoring and evaluation of policies provides evidence of what is being produced, how it is being implemented and whether or not it is achieving its objectives (and why or why not). However, monitoring environmental services is not only challenging but also absorbs a significant proportion of a PES budget and influences the structure of the scheme (Baker et al., 2010). In many developing countries, monitoring of ES is difficult because of unavailable and/ or inconsistent data from which to establish a baseline or evaluate agreed-upon targets (Bishop et al., 2008; Pham et al., 2013) and weak coordination and information sharing among stakeholders, such as between implementing agencies and ES providers (Korhonen-Kurki et al., 2013). Several scholars have studied and identified criteria for high-quality environmental services assessment (Ruckelshaus et al., 2015; McKenzie et al., 2014). However, how to embed environmental services assessment into planning and decision making and what action guidelines should be provided for policy makers remains scarce (Rosenthal et al., 2015). Limited resources and knowledge, poor-quality data or missing information, and conflict of interests and demand from various stakeholders have prevented PES policy and practitioners in designing and implementing effective monitoring and evaluation system (Rosenthal et al., 2015).

In this paper, we draw on the case of the evaluation of Vietnam's Payment for Forest Environmental Services program (PFES), which reflects the problems of many PES schemes around the world, which are mainly based on not having reliable and adequate data or infrastructure for an adequate policy evaluation. We analyze the implementation, whose environmental and social impacts are critical for refining and scaling-up this policy and suggest practical recommendations on how to improve current PFES monitoring and evaluation systems. Several studies have attempted to complete such an evaluation by reviewing the lessons learned from the implementation of PFES in Vietnam (e.g., Nguyen (2011), McElwee (2012), To et al. (2012)). Most of the studies and information available on PFES in Vietnam focused on a single province (Hess and To, 2010; Nguyen, 2011), on a single issue, such as the inequity of land distribution or biodiversity loss and provide a monitoring figure of a single year (McElwee, 2012; To et al., 2012), or on economic benefits alone (MARD, 2010a; Tran, 2010). Past assessments were based on the analysis of results in the PFES pilot provinces Lam Dong and Son La Provinces and PES-like projects underway before Decree 99/2010/ND-CP¹ mandated the nation-wide implementation of the PFES policy in 2010 (e.g., Hoang et al., 2008; Pham et al., 2009; Kolinjivadi and Sunderland, 2012; To et al., 2012). Until now there is a lack of reliable and adequate data on the actual impacts of PFES policies both on environmental performance and livelihoods improvement. The major reason for the lack of reliable and adequate data on PFES policy impacts lies in the weak coordination amongst government agencies that implement the program. The absence of clear monitoring indicators and reporting system in place, and shortage of human resources and staff capacity in local government departments are identified shortcomings (Pham et al., 2008, 2014). This paper contributes to current literature as it provides a more complete and integrated view on Vietnam's PFES program.

In this study, we assess the effectiveness of the monitoring and

evaluation (M&E) system in place in Vietnam and the ability of the M&E policy framework to track PFES impacts on environmental, social and economic outcomes. In the context of policy assessment, we understand effectiveness as the extent to which PFES contributes to achieving a defined policy objective (Ring and Schröter-Schlaack, 2011). These objectives include "the improvement of forest quality and quantity, an increase in the forestry sector's contribution to the national economy, a reduction of the state's financial burden for forest protection and management, and improvement of social well-being" (see Pham et al. (2014)).

The paper is structured as follows: In Section 2 we provide essential background to the PFES program and introduce a framework for the analysis of monitoring and evaluation in PFES. Section 3 introduces the methods applied in this study. The findings are presented in Section 4 and discussed in subsequent Section 5. We end with concluding remarks in Section 6.

2. Background and framework

2.1. Background

In 2004, the government of Vietnam drew on the concept of PES to lay the foundations for a nationwide program called Payments for Forest Environmental Services (PFES), set out in the revised Forest Protection and Development Law 2004. In 2008, the government issued Decision 380/QD-TTg (Decision 380) to establish the conditions to support PFES pilot projects in Lam Dong and Son La Provinces, and in 2010, Decree 99/ND-CP mandated the nationwide implementation of PFES from 1 January 2011. Vietnam is the first country in Southeast Asia to initiate a nationwide PES scheme.

The PFES scheme in Vietnam deviates from the classic definition of PES set out by Wunder (2015, 2005). The essential difference between PFES and Wunder's definition of a PES lies in the lack of the voluntariness of the participating ecosystem service providers and beneficiaries (Wunder, 2015). The government of Vietnam issued a policy commanding defined ecosystem service beneficiaries from the water, electricity or tourism sector to engage in the scheme and pay a government-set price for the provision of ecosystem services to providers of the services. Decree 99 defines four ecosystem services: (i) watershed protection (including soil protection, reduction of erosion and sedimentation of reservoirs, rivers and streams, as well as watershed protection, and regulation and maintenance of water sources for production and people's daily needs); (ii) protection of natural landscape beauty and conservation of biodiversity of forest ecosystems for tourism services (iii) forest carbon sequestration and retention, reduction of greenhouse gas emissions through prevention of forest degradation and loss, and sustainable forest development (iv) provision of spawning grounds, sources of feeds and natural seeds, and use of water from the forest for aquaculture (Pham et al., 2013). Out of these, the PFES program for watershed protection services has the most advanced legal setting. Beneficiaries of these services must pay a fixed payment: Hydropower plants pay 20 VND (or 0.1 USD cent) per one kilowatt-hour produced, water supply companies pay 40 VND (or 0.2 USD cent) for one cubic meter of produced drinking water and tourism businesses pay 1-2% of their gross revenue. Service providers are the forest land-use rights holders that include individuals, households, communities or organizations deemed qualified by the provincial administration to supply a service based on their land-use right certificate. They must sign a commitment to forest protection (Pham et al., 2013).

The institutional setting for PFES in Vietnam relies heavily on the Forest Protection and Development Funds established at

¹ In the following "Decree 99".

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