



A Feasibility Study on Payment for Forest Environmental Services in Cambodia

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Abstract The study conducted a feasibility study on payment for forest environmental services in Cambodia, combining quantitative and qualitative data sources. Literature reviews and interviews were conducted to determine conditions required for payment for ecosystem service success, and focus groups discussion and household surveys were employed to capture villagers' behaviors in forest management and payment for forest environmental services. Results showed that conditions required for PES success include clear defined ecosystem services; flexible contracts and payments; transaction costs that do not exceed potential benefits; a reliance on multiple sources of revenue delivering sufficient and sustainable money; a close monitoring of compliance, land use change and provision of ecosystem services; and the flexibility to improve effectiveness and efficiency and adapt to changing condition. PES-like failures in Cambodia resulted from inequity of benefit-sharing, a lack of management committee capacity to monitor participants and carry out punitive measures, and the poor quality of services and communication skills. Factors contributing to PES-like successes were simple and local program organization, low administrative costs, transparency of benefit-sharing to services providers, and active participation from villagers in complying with the regulations of programs. PFES could be integrated into the REDD finance mechanism. As a result, the case study in Chambok exemplified a community-based forest suitable for PFES implementation and possibly a joint program. This would lead to improved livelihood conditions of local communities through forest cover protection, and increase the awareness of downstream and upstream villagers in ensuring the sustainable provision of services.

Keywords Cambodia, feasibility, forest management, livelihood improvement, PES

INTRODUCTION

Commercial logging, shift cultivation, wood harvesting for woodfuel and charcoal production, and habitat destruction by local villagers and in-migrants are the major driver to deforestation and forest degradation, and great threat to biodiversity. Government policies or incentives for forest management are urgently needed to secure sustainable use of forest resources and improve local livelihoods. In light of the failure of the command and control approach, payment for forest environmental services (PFES) may be considered a potential solution. There are number of successful studies on payment for environmental services (PES) from both other countries and Cambodia. In Costa Rica, environmental services (ES) is being bought through biodiversity conservation, carbon sequestration, watershed protection, landscape beauty and bundled services (Alcamo et al., 2008). The payment was made to water services at about (USD 40-43/ha/yr), biodiversity (grant from CBD, UNFCCC, Global Environmental Facility, CI and other bodies), Carbon sequestration (based on Certifiable Tradable Offset, CDM) and landscape (paid by hotel, tourists and other users) (Pagiola, 2008). In Cambodia, there are three types of PES-Like ranging from community based ecotourism, agri-environmental, and bird-nest protection programs.

OBJECTIVES

The overall objective of this research is to conduct feasibility study on payment for forest environmental services in Cambodia. The specific objectives of the study are to: (i) determine condition required for PES successes, (ii) identify factors contributed to PES-Like successes and failure in Cambodia, and (iii) conduct a feasibility study of PFES in Chambok area in Kampong Speu Province, Cambodia.

METHODOLOGY

The research combined quantitative and qualitative data sources from two different levels, national and local. For national level, existing literatures was reviewed for accessing of what condition to securely require PES success with the experiences from other countries. Key Informant Interview (KII) were also conducted for capturing their perception associated with the failures or successes of PES-Like schemes in Cambodia in relation to the factors driving forces to deforestation and degradation of forests. Six KIIs, who had experiences and worked closely related to PES in Cambodia, were planned for interview (two from government and four from NGOs); but only five KIIs were available for interview (one NGO was unavailable.) A fixed set of questionnaires were used and responses were recorded and later transcribed. Chambok area located in Phnom Srouch District, Kampong Speu Provinces was selected as the case study for identifying the perceptions and behaviours of villagers associated with forest management. In this regards, for local level, two small samples of twenties households were surveyed – one sample from an upstream community and one from downstream community. All households sampled make daily use of forest. The household selection was systematically selected (one household surveyed, four households missed, next household surveyed) and interviewed face to face with the complete set of questionnaires. With the purpose to capture more in-depth information, FGDs were conducted to recover the root causes of deforestation and understand the livelihood option and forest management behaviours of villagers. Two FGDs (one at the upstream and one at the downstream community) were interviewed in order to evaluate the understanding of these two stakeholder groups. Questionnaires, recorders, and flip chart were used during discussion.

RESULTS AND DISCUSSION

Motivation of PES in Cambodia

From the forest resource point of view, PES appears necessary to ensure the forest coverage. The constitution and forest law pave ways to sustainable use of forest while protected area policy warranty the minimum forest coverage area. Forests in Cambodia fall under the general jurisdiction of the MAFF, with the FA charged as the responsible Government Authority (Forestry Law 2002, Article 3), the MoE is responsible for Protected Areas (PA), and the FiA is responsible for flooded forest and mangrove areas (Fisheries Law 2006, Article 3). Cambodian Law is hierarchical, therefore all subsidiary regulations should respect to differentiation of responsibilities laid out in the Forestry Law and other Laws. Even the law on PES is not legally regulated, the Royal Government of Cambodia (RGC) has set numbers of policies to ensure forest coverage and supported PES through REDD mechanism. For instance, the REDD project in Oddar Meanchey, under the collaboration between the FA and PACT Cambodia through thirteen CF, used PES as a mechanism for the distribution of benefits from the sale of carbon credits on the voluntary market (Chervier et al., 2010). About 7.1 million metric tons of carbon dioxides could be sequestered for over thirty years, while around 1,000 participated household were benefited (Poffenberger et al., 2008). The RGC has set policies to reform land administration and natural forest resource management. The reform has focused on strengthening environmental protection and natural forest resources through enhancing sustainable forest management, the use of forests to improve the livelihoods of people, demarcated PA system to protect biodiversity and endangered species, and

decentralized forest management through community forestry program. The use and extraction of forest products are carefully regulated through the delivery of permits, regulation of guideline for management, prohibited activities, and endorsement. The RGC also encouraged manmade plantation substitute for national forest demands, and created public awareness to replant and used community plantations for firewood and charcoal needs.

Condition Require PES Success

PES schemes tend to perform successful under the conditions clear and mutual agreement linking land uses to the provision of ES (Mayrand and Paquin, 2004); clearly defined ecosystem services (Wunder et al., 2008); flexible contracts (Sommerville et al., 2009) and payments and transaction costs do not exceed potential benefits; a reliance on multiple sources of revenues delivering sufficient and sustainable money; a close monitoring of compliance, land use change and provision of ecosystem services (Arriagada and Perrings, 2009; Landell-Mills and Porras, 2002); and the flexibility to improve effectiveness and efficiency and adapt to changing conditions (Sommerville et al., 2009). The conditions require PES successes are also depended on the successful completion of a series of steps (Fig 1). First, potential service providers must enroll in the program, and secondly service providers must comply with the terms of their contract. Third, compliance must result in a change in land use compared to what would have happened without the program (Wunder et al., 2008). The development framework for successfully ES market consist of six steps (Landell-Mills and Porras, 2002): (1) Identify benefits provided by a specific service and by determination of forestry activities that deliver this services, (2) Undertake a feasibility study, (3) Establish willingness to pay, (4) Formalize property rights, (5) Establish payment mechanism and supporting institutions, and (6) Undertake pilot activities and feedback to market design. In this regards, the needs to provide training or capacity building to PES providers are required in order to increase the attraction from buyers and their willingness to pay for ecosystem services.

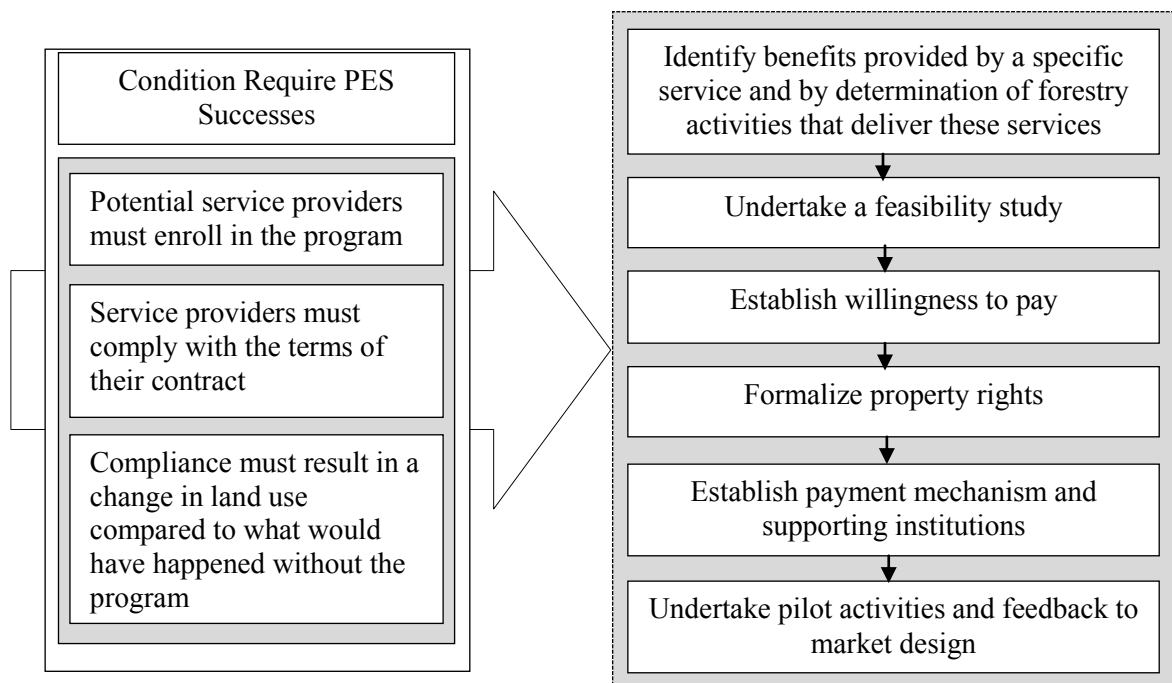


Fig. 1 Conditions require PES successes and framework for successful ES market development