

Organisational and Institutional Opportunities and Constraints for Poor Households to Participate in Payment for Environmental Service Schemes in Vietnam

Pham Thu Thuy, Stephen T Garnett and Heather J Aslin

Payment for environmental services (PES) can be a poverty reduction strategy. Findings from two PES case studies in Vietnam indicate that the involvement of the poor is enhanced by increasing attention and interest from donors and the private sector. However, their participation is limited due to political influences which weaken environmental services monitoring, and weak local intermediaries who are limited in their capacity to represent and protect the poor. Whether PES schemes can be pro-poor depends on the scope of the project, the political, social and economic context of the case, and the local definition of poverty. Capacity building for the poor, coupled with better coordination for transparent and equitable benefit-sharing and monitoring mechanisms, need to be in place to ensure that the poor will not be marginalised.

Introduction

The significance of pro-poor payments for environmental services (PES) has recently been acknowledged in Vietnam and other developing countries, as poor households not only depend greatly on environmental services (ES) for their livelihoods, but are also likely to be key ES providers (Bulte, et al 2008; Pham, et al 2008, Lee & Mahanty 2009, Pham, et al 2010). It is recognised that, because poor households and communities often live in areas that are ecologically sensitive and important for national security, there is potential for these households to derive benefit from PES schemes (Milder, et al 2010; Pham, et al 2010).

Despite this potential, some authors have expressed concern about whether PES should be biased towards enhancing the lives of the poor or not (Wunder 2007; Lee & Mahanty 2009; Neef & Thomas 2009; Pham, et al 2010). Recent scholarly debate has also questioned how poor households can be effectively involved in, and how they may be affected by, PES schemes (Bulte, et al 2008; Porras, et al 2008; Wunder 2008; Zilberman, et al 2008). Numerous studies have attempted to understand how poor households engage with PES (eg, Kosoy, et al 2007 in Mexico, Nicaragua

and Guatemala in 2007; Corbera, et al 2009 in Mexico). However, exactly how poor households are to be involved in PES, and what real benefits they receive from doing so, are unknown (Milder, et al 2010).

The success or failure of PES and pro-poor schemes depends largely on the nature of the institutional framework and setting (Neef & Thomas 2009; Zabel & Roe 2009; Clements, et al 2010; Vatn 2010). Institutional frameworks have the capacity to influence a number of key areas in the delivery of PES schemes, including actor relationships, funding and longevity of the scheme, motivational factors including level of interest and involvement of beneficiaries, and the overall nature of PES scheme outcomes including degrees of success or failure (Corbera, et al 2009). To-date, there have been few systematic studies focusing on institutional issues (Muradian, et al 2010). Some of the critical gaps in pro-poor PES research and evidence in relation to this are: the overall impact of pro-poor PES schemes on the poor (Milder, et al 2010); the opportunities and constraints that may affect the participation of the poor, with current PES studies tending simply to observe patterns of the poor's participation in PES without attempting to determine critical influences (Engel, et al 2008); and a specific lack of case studies in developing countries analysing PES design and impact on the poor (Lee & Mahanty 2009; Petheram & Campbell 2010).

Using two PES cases in Vietnam (one on carbon sequestration and the other on watershed protection), this study aims to identify specific organisational and institutional opportunities for, and constraints to, involvement of poor households in PES schemes. Three research questions are addressed:

- Are there significant opportunity or transaction costs in participating in PES?
- What are the organisational and institutional constraints on poor households becoming ES providers?
- To what degree could a potential PES scheme reduce poverty?

The study highlights the importance of adequate institutions in the design and performance of pro-poor PES schemes.

Methods

The study combines evidence from existing literature on PES with data from fieldwork conducted during 2008 and 2009. Participants' views on pro-poor PES and opportunities for and constraints on the poor participating in PES were interpreted and analysed through direct observations of the poor's circumstances. This material was complemented by the analysis of data from interviews and focus group discussions.

Table 1
General Information on the Case Studies

	Carbon sequestration scheme	Watershed protection scheme
Number of village households	87	85
Number of households participating in PES schemes	40	65
Ethnicity	Muong	Muong, Tay, Nung
Main local livelihood strategies	Rice and sugar-cane cultivation, plus working in Hanoi and other big cities	Paddy rice cultivation and livestock production
Infrastructure	Easy access to the main road	Geographically isolated, with poor roads and infrastructure

Case Study Selection Criteria

The criteria used to select case studies included the availability of reports on the PES project performance; the willingness of related stakeholders to be involved in the study; the high levels of degradation or reduction of ES; and the ability to gain permission to visit the project areas. One watershed protection case and one carbon sequestration case were selected: see Tables 1 and 2. Both of these schemes were donor-funded and are being implemented in northern Vietnam. In the carbon sequestration case, the contract was signed for four years between a private company and a non-profit organisation (NPO) acting on behalf of the individual households. In the watershed protection case, the contract was signed for seven years between poor households, an international agency and a private company. In both cases, government agencies, non-government organisations, private companies and local organisations were important intermediaries in facilitating PES establishment and implementation.

Institutional and Organisational Analysis Frameworks

Organisational and institutional opportunities for and constraints on involvement of the poor in the case studies were analysed using a selection of frameworks, with the understanding of local poverty and the extent to which PES schemes could reduce poverty drawing on the stage of

Table 2
Summary Data on PES Schemes in the Case Studies

	Carbon sequestration scheme	Watershed protection scheme
Years of operation	2008-2012	2008-2014
ES buyers	Private company	International agency and private company
ES sellers	A local non-profit organisation (NPO) that was established to receive the funds from the private company and to manage the payments	Individual households
Intermediaries	Professional consulting firms, government research institute, and an international agency	Professional consulting firms, government research institute, international agency, international research institute, and international NGOs
Rules of the game/contract arrangements	Benefit-sharing mechanism is based on sales of timber (people will get 75% of revenue from total timbers sold and NPO will get 25% of timber revenue), and carbon credits (people get 50% of carbon credits sold and NPO will get 50%). The NPO will re-invest the money they receive in forest establishment through rotation, technical assistance, monitoring, and carbon trading procedures	There is a plan to organise a conservation trust fund, where contributions from ES users (both private and governmental) will be pooled
Property rights	The household signatories to the contract have land use rights	The household signatories to the contract either have land use rights or they plant forests on community land
Monitoring	Professional consulting firms and the government research institute monitor carbon change over time. Local authorities monitor the plantation	Professional consulting firms and international research organisation monitor the hydrology over time

progress method developed by Krishna (2007). The frameworks include organisational arrangements (stakeholders involved, intermediaries), property rights over land use and ES, contractual arrangements (distribution of rights and the rules instituted to govern the interaction between the agents), mechanisms for the monitoring of ES and contracts, and the level

of the transaction costs (Neef & Thomas 2009; Clements, et al 2010; Vatn 2010).

Participatory Approach

Interviews and focus group discussions were conducted at project, community and household levels. The interviews sought to identify the opinions of local people about the strengths and weaknesses of the PES schemes investigated; the opportunities for and constraints on involvement of poor households in the PES schemes investigated; the current land use and livelihood activities of the poor in the areas before and after the PES schemes were implemented; and the strategies poor households might employ to escape poverty if there was no PES scheme in place. At the project level, five in-depth interviews (one with a project manager, one with an intermediary, one with a project staff member, and two with local authorities) were conducted at each site. The selected informants were those who coordinated and managed the PES schemes investigated and who had working experience of PES.

Focus group discussions were limited to the community level, in two randomly selected villages. Each focus group discussion had twelve households present, which were representative of village socio-economic characteristics of wealth, gender, age and ethnicity. In both cases, the households accounted for 14 percent of the total households in the villages. At the household level, four in-depth interviews were conducted at each village. The four interviewees were selected to represent the poor only, and they were chosen randomly based on the list of poor households prepared by the heads of the villages for submission to the commune. The focus group discussions considered village and commune trends. The in-depth interviews explored factors that influenced households' choices and willingness to participate in a PES scheme.

Results

Opportunity and Transaction Costs

Although PES is said to be cost-effective relative to indirect approaches and integrated conservation and development programmes (ICDPs) (MacKinnon & Wardojo 2001; Wunder, et al 2005), PES is destined to fail if the costs of implementing a scheme, including compensation payments, are less than the benefits obtained from existing land uses (Wunder 2008; Beria, et al 2009). In addition, the level of PES payment offered to ES sellers should exceed the opportunity cost¹ of an alternative land use. Similarly, to make the transaction attractive to the ES buyer, the benefit should exceed the financial outlay (Engel, et al 2008). However, high transaction costs² and opportunity costs are likely to be much greater obstacles to the participation

of poorer households than the households' own limitations such as limited education and financial capacity (Wunder 2008, Engel, et al 2008).

In the carbon sequestration case, the opportunity cost for poor households was their labour and the time they would otherwise have used to plant sugar cane or work as fruit pickers for local orange farms. The daily income for these activities was about 60,000 Vietnamese Dong (US\$3/person/day). By participating in the carbon sequestration project, they would have to compromise their time to plant trees without any payment for the first six months. In the watershed protection case, to protect the watershed and valuable timber forests, the local people argued that they would have to give up a high income from selling a log of this timber even if this was cut illegally. According to the local authorities and local people, a log 20cm long and 50cm in diameter could be sold for VND 200,000 (US\$11) inside the forest, and VND 350,000 (US\$20) when brought to the main road. Local people also claimed that if they successfully transported the timber to the Vietnam-China border, they could earn more than VND 2 million (US\$111) for a log of the same size. While the level and form of payment for ES were discussed among buyers, donors and intermediaries, all interviewees agreed that this payment would not cover the opportunity cost for local people.

All households interviewed in the carbon sequestration case claimed that the opportunity cost of the land use change was low, since the project used bare land for which people had no real plans. In contrast, in the watershed protection case, the local people asserted the opportunity cost for them was high. A large area of local land had been acquired by the government on behalf of a company for the construction of a hydropower plant, but villagers had been paid a very low price compared with what they considered to be the actual value of the land. All four household interviewees in this case argued that they had lost income from at least three crops of corn without any compensation from the buyers or the government. They also claimed that they had lost the chance to pass on to their children the land and traditional houses that existed on the excised land – a lost opportunity that was culturally and spiritually important to them. The buyers interviewed in this case, however, claimed that they were only willing to pay what current government regulations required, which was nothing in this case according to the households interviewed.

Interviews and discussions with all stakeholders at both sites indicated that local authorities and local people had not considered the opportunity costs. Nor had they considered transaction costs, either at the individual or project level. There were no figures available on transaction costs. However, concerns were raised by households interviewed and during the focus group discussions concerning the number of meetings households had to attend and the time taken at each meeting. According to interviewees, up to the stage of contract signing, each household needed to attend without compensation at least four to ten half-day meetings, which impacted on

their daily income.

The interviewees agreed that most of the transaction costs for establishing and implementing PES were covered by the intermediaries and donors. Their contribution to the process reduced overheads and administrative costs of a PES scheme as they generally provided those services free of charge. Consequently, both ES buyers and ES sellers could benefit from donor contributions, and the cost of schemes would be much higher without that contribution.

Organisational Arrangements

For a PES scheme to be successful, there must first be a locally based and supported organisational structure in order to negotiate and implement contractual arrangements (Wunder, et al 2005; Lee & Mahanty 2009). In the case studies, the involvement of both international and national stakeholders in both schemes enabled the poor to be involved in the process.

First, all of the project leaders and local authorities interviewed in both cases argued that international stakeholders and government agencies liked to include poverty reduction as one of the project's goals; hence they selected poor households as one of their target groups. The key informants in both cases also asserted that the government wanted to attract private sector investment in poor areas; hence they provided tax concessions to companies that operated in poor and remote areas. The buyers interviewed in both cases confirmed that this enhanced their level of interest and willingness to work with poor households. The buyer in the carbon case highlighted that involving poor households in their PES project assisted the company to implement their social and corporate responsibility policies and improve their public image.

Second, most of the households interviewed perceived that the engagement of local organisations such as farmers' associations, non-profit organisations and the heads of villages enhanced the involvement of the poor in these projects. The interviewees claimed that these organisations and individuals helped link the poor to the intermediaries and the buyers by organising village meetings and identifying poor households for these stakeholders (although identification was not always accurate – see below). While the organisational arrangements of the PES schemes investigated were seen by most interviewees as providing opportunities for the poor to participate in PES, interviewees also thought that involvement of too many stakeholders in the process had increased the transaction costs and delayed the progress in project approval and implementation. All households interviewed in both cases considered that this had affected the level of trust and willingness of the poor to engage in the projects.

Property Rights over Land and ES

Property rights in the PES context not only relate to land ownership, but also land use rights and the right to derive commercial benefit from services generated from natural assets (Vatn 2010). For PES to be successful, it is important to have and secure land tenure, as it ensures the continuing provision of ES as well as the eligibility of the poor to be the ES providers (Bracer, et al 2007; Beria & Lee 2008).

The study highlighted that there were both opportunities for, and constraints on, the poor obtaining rights over land to provide ES. In the watershed protection case, both the donors and the government scheduled and accelerated land allocation and allocated a budget for its implementation. According to local authorities and donors in this case, this empowered the poor and helped them to enter PES contracts more easily. However, land allocation was planned to take place over several years and, until complete, it would be difficult for poor households to participate in PES as ES providers. In addition, households interviewed claimed that since the land belonged to the government and they only had land use rights, they remained vulnerable as land use could be changed by government policy. In the carbon sequestration case, the buyer interviewed argued that clear land tenure was a critical requirement in selecting their ES providers. However, only a small number of ES providers were poor households, since most poor households in the area did not have land use rights. They only had land “usufruct”³ rights, while the rich with better financial capital and information access had better access to land use rights attractive to the buyer.

In both cases, the households interviewed emphasised the barriers to them in obtaining land use right certificates. They complained that not only was it time consuming because they had to submit many forms and follow many procedures, but they sometimes had to bribe the head of the commune and the village to obtain these certificates. They considered that land allocation processes needed to be accelerated and made simple and transparent, and barriers such as complicated procedures and unofficial costs needed to be removed if the poor were to benefit from PES.

In addition to land ownership and use rights, the capacity to access new land was another area of concern for poor households. Good agricultural land was becoming increasingly short in supply due to increasing population densities and unallocated land being predominately remote or non-arable (sloping, rocky, etc). Most of the good arable land had been allocated some 20 years ago.

Contract Arrangements

The carbon sequestration case had more complex institutional arrangements than the watershed protection case: see Table 2. The contract was made

directly with a village organisation in the watershed protection case, while the project in the carbon sequestration case depended on a non-profit organisation to sub-contract to individual farmers. Notwithstanding, the scheme in the watershed protection case failed to build community support in local management organisations. By contrast, contractual arrangements in the carbon sequestration case were managed by local organisations and, while they took a longer time to become established, they were widely understood and better supported by local people and therefore were more effective.

The level of payment that sellers received depended largely on their ability to negotiate a fair price. Access to market information and supportive local institutions can enhance the bargaining position of rural land holders and communities (Milder, et al 2010). However, all interviewees in both cases agreed that a major barrier to the poor becoming ES providers was that poor households had limited ability and capacity to negotiate contracts. This was largely because they were marginalised not only economically but also geographically and in terms of information, communication, education and language.

They also indicated that the level of payment in these schemes and the contract clauses were proposed and mainly decided on by the buyers. Nevertheless, poor households still signed the contracts, for two main reasons. First, all households interviewed claimed that not signing the contract would lead to social isolation because the head of the village and their neighbours had all signed contracts. Second, the buyers were often in alliance with local organisations and individuals, such as the heads of the villages, whom they trusted and felt obliged to follow.

While using the community's social cohesion to increase the willingness of poor people to participate in PES could be useful for PES designers, cautious planning is needed since other external groups can exploit this trust to encourage people to sign high risk contracts. The households and intermediaries interviewed in the carbon sequestration case claimed that many private companies had bribed the heads of villages and lobbied community groups to persuade poor households to participate in PES contracts. These interviewees also emphasised that the rich in the community were often the best informed and had the most influential networks. The head of the village or the commune often provided their relatives or more affluent friends with the more lucrative contracts, while the less desirable and difficult contracts were passed on to the poor.

Monitoring of ES and Contract Enforcement

In both PES cases studied, ES and contract monitoring were carried out mainly by international non-governmental organisations (NGOs), private companies and government agencies, and were based mainly on field visits and personal assurances by technical staff. Nevertheless, most PES project

staff admitted that few site visits were made.

All interviewees in both cases argued that monitoring the ES and contract was difficult due to a poor record of evaluation against agreed targets, as well as unavailable and inconsistent data on different types of ES. There was also limited involvement of poor households in the process, for two main reasons. First, according to all interviewees, monitoring ES required technical skills and the poor lacked a sufficient understanding of the monitoring method that was used. Second, the buyers interviewed claimed that they preferred to work with trusted intermediaries in monitoring ES to ensure quality and consistency in monitoring.

The study also found that many households had little capacity to assess their own contract compliance. Six out of eight households interviewed at both sites claimed that they did not keep a copy of the contract after they signed it because they did not appreciate its importance. Intermediaries and households interviewed indicated concern that, should conflicts occur, buyers were in a much better position to defend their position than sellers, and it would be more likely that the poor sellers would have to bear any losses.

The failure to keep contracts may have reflected a feeling of powerlessness among ES sellers. The local authorities argued that the government favoured the private sector, not only financially but also legally. They claimed that the government was lax in ensuring compliance because it believed that forcing the private sector to comply with the contract would reduce the investment and dilute commitment of the more financially powerful sector. The local people, however, expressed concern that the more powerful actors were protected by their good relationships with decision makers. All households interviewed stated that they would rather accept a poor situation than challenge it or stand up for themselves because they did not believe they had the power to change things.

To What Extent Could the PES Scheme Reduce Poverty?

Most interviewees agreed that PES projects could reduce poverty; however, success depended on how poverty was defined and measured locally and the degree to which poor households were motivated to participate in the poverty reduction strategies. The study concluded that both cases were not successful in this area.

First, all project managers and staff interviewed claimed that poor participants were selected on the basis of the government's definition of poverty. In Vietnam, the government uses the monthly income of households to differentiate poor households from non-poor households. Under the government's existing definition, poor people are those earning less than VND 200,000 per capita (US\$11) per month in rural areas, and less than VND 260,000 per capita (US\$14) in urban areas. In both cases, all key informants claimed that the government's definition did not truly reflect local definitions of poverty, since income was only one of several

factors used to define poverty. The various criteria used to identify poor households by interviewees in both cases included: area of land (< 400m²); the amount of debt (> VND 4 million) and savings; the ability to cover medical costs; the means of transportation and mode of payment for transportation (bike or motorbike and whether or not they needed to borrow money to buy a motorbike); the number and scale of businesses; the stability of occupation (public servants who have stable monthly incomes or farmers who do not); and house type (either a traditional wooden house or a non-traditional concrete house). Viewed through the lens of the local definition of poverty, interviewees claimed that the two PES projects were not able to alleviate poverty. According to household interviewees, the PES schemes and associated activities were not able to help them obtain more land, reduce their level of debt, or assist with medical support to the poor. In addition, many truly poor households according to local perceptions were not selected in the project and the assessment of a project's impact on poverty reduction (based on the number of poor households helped to increase income to more than VND 200,000 per capita) was disingenuous.

Second, Table 3 outlines the common progressive stages that poor households typically follow in escaping poverty, and the particular stage at which households were considered as "poor", "no longer poor", and "rich" in the two cases investigated. The pathways out of poverty differed between the two cases, reflecting differences in socio-economic context. In the watershed protection case, people had limited access to roads, markets, infrastructure and education, and their main poverty relief strategies were based around raising livestock. In contrast, in the carbon sequestration case, where people had access to roads, infrastructure and the city, people sought to obtain jobs or provide services in the city. At both study sites, people perceived that increasing the area of land for which they had land use rights and observing social norms (eg, owning a traditional wooden house) were principal requirements for poverty relief.

Most interviewees at both sites claimed that poor households could not afford to buy more arable land. Their income was only enough to cover their daily food requirements. Since the land available for households was limited, these poor households either had to borrow money from relatives (carbon sequestration case) or buy poor quality land in a remote area to expand their area of production (watershed protection case). In both cases, PES projects did not help people to obtain more land, but in fact further constrained the use of the land that they had. In the carbon sequestration case, the ES buyer only selected people who already had land and land use rights and paid them to plant and protect trees on their land for four years. In the watershed protection case, the land available for agricultural production was reduced through the construction of a hydropower plant.

Complying with social norms was also difficult since traditional wooden houses required special and rare timber species only available from natural forests (including protected areas). In the carbon sequestration case, the availability of these high value timber species was limited due to

Table 3
Progressive Stages in Escaping Poverty (following Krishna 2007)

Stage	Watershed protection case	Carbon sequestration case
Poor households		
0	Limited area of land (less than 400 m ²); seriously in debt (more than VND 4 million); unable to cover medical costs; do not have a motorbike; no, or limited number and scale of, businesses; unstable occupation; poor house condition	
1	Buy pigs (1-2 pigs)	Work for orange and sugar cane farms or go to work in the city
2	Buy buffalo, cows (2 cows and 1 buffalo)	Plant sugarcane and increase rice production by adding more fertilisers
Poverty cut-off: households no longer considered poor		
3	Buy more paddy rice fields to ensure food security and build a wooden house to comply with tradition and customs	
Prosperity cut-off: households considered well-off		
4	Plant forests or open businesses	Plant mixed forest on the bare land and send children to work as housekeepers or work overseas

the decreased area of natural forest. All households interviewed asserted that only the rich could afford to buy such timber. In the watershed protection case, people were paid to protect the forests and people faced a high risk of jail if they were caught taking timber by the forest protection officers. To escape poverty and to avoid being caught by National Park staff, all households interviewed in this case admitted that they had to enter the forest at night and illegally log the trees for their house building. Because they could transport only a small amount of timber at night, these households said that it took them at least two years to have enough timber to build their houses. They were also confused by contradictory government policies. On the one hand, the Ministry of Culture, Sports and Tourism wanted to reserve traditional wooden houses for ethnic groups. On the other hand, the Ministry of Agriculture and Rural Development banned logging of timber needed to build traditional wooden houses.

Most local people saw tree planting as a means for them to be wealthy in the future. However, they perceived that only the rich had enough

capital, labour and technical skills to invest in forest plantations and their management and claimed that the PES projects had not been able to provide sufficient support in that respect.

All interviewees asserted that PES generally provided important livelihood benefits to poor people at the household or community level, whether in the form of cash payments or non-cash benefits, but the extent of benefits was limited. At the household level, all the interviewees agreed that these two projects did empower poor households by providing training in forest silviculture techniques. They also benefited from labour opportunities that arose from planting trees, although these opportunities were only short-term. However, the level of payment was too low to alleviate poverty. According to households interviewed in the carbon sequestration case, each of the households was paid VND 3 million for four years to plant and protect the forests, while their expense for one year was VND 6 million. In the watershed protection case, both the ES buyers and sellers admitted that the payment was very small and not sufficient to help participants address poverty. A project leader stated that “it was just a small incentive to encourage people to pay more attention to environmental protection”.

General Discussion

Understanding Local Definitions of Poverty and Local Strategies to Escape Poverty is Important for Pro-poor PES Designers

As indicated above, poverty is multi-dimensional and should be assessed more broadly than in terms of cash income alone (Dudley, et al 2007). The study highlights that country poverty assessments are problematic as they usually rely exclusively on the quantitative analysis of data obtained from household surveys. These typically oversimplify complex issues and imply poverty reduction is just a function of economic growth; hence they misrepresent the means and processes of poverty alleviation (Thomas, et al 2008).

While financial measures can be a useful means for making international comparisons, they are a weak indicator of poverty as a “lived experience” and insufficient as a tool for analysing poverty in the poverty reduction context. Poverty thresholds measured in dollar terms alone cannot explain why people are poor or what is needed for them to escape poverty. If PES is to be pro-poor, quantitative survey methods (as often adopted by governments) need to be complemented by qualitative livelihood studies to better understand local perceptions, transition stages, and the steps required to go from poverty to prosperity.

The study suggests that it is important to take into account not only what constitutes local poverty, but also what constitutes getting out of poverty as that is fundamental to PES and pro-poor development.

Understanding what households want in terms of pathways out of poverty is a useful element in the design of pro-poor PES schemes.

Monetary Gain does not always Influence the Poor's Willingness to Participate

In the literature on PES, there is little exploration of the range of factors affecting people's perceptions and how these drive their willingness to participate in PES (Petheram & Campbell 2010). The idea behind PES is to facilitate more environmentally-friendly action by paying ES providers to preserve and produce ES. Marginalised smallholders are not likely to participate in a voluntary PES programme that reduces land available for agricultural production unless they receive equivalent (or preferably greater) compensation for their trade-off (Neef & Thomas 2009; Milder, et al 2010).

While economic incentives can work as part of a PES programme, broader community benefits and social needs should be carefully considered when formulating such programmes (Muradian, et al 2010, Vatn 2010). In some circumstances, it is not the economic incentive influencing "intrinsic motivations" for environmental protection behaviour (Clements, et al 2010), but social and cultural factors that are most important (Vatn 2010). As shown in this study, PES participation may not cover opportunity and transaction costs of poor households, but the poor may still choose to engage in PES for non-monetary reasons, such as the need to be a part of the community or to receive training, technical assistance or some other non-cash benefit. Non-cash benefits should be considered by PES designers in PES project formulation and design, particularly when ES buyers cannot offer a high level of payment.

Working with the Private Sector: a Challenge

While some analyses claim that ES buyers may not want to work directly with individual households because of high transaction costs (Pagiola, et al 2005; Wunder 2007), this study found that buyers will do so where there is a possibility of accessing government credit at concessional rates and obtaining political favours. Pressure to show corporate social responsibility and public relations considerations are also currently major motivators for buyers in voluntary carbon markets (Milder, et al 2010).

Although government policies may encourage the private sector to work with the poor, hence providing the poor with greater opportunities to participate in PES, the case studies show that the poor can be disadvantaged when working with the private sector. First, the private sector is often provided an inequitable level of support by policy makers, particularly in shaping the rules; they also have greater access to technical and market information, improved access to capital, and increased buying power through economies of scale (Milder, et al 2010). Second, of the four

criteria required for poor households to participate in PES (eligibility, desire, ability and competitiveness), the ability of the poor to participate is the most problematic. The ES market niche identified in the case studies was narrowly defined and unfamiliar to most poor ES sellers. Poor households indicated that they knew of only one channel through which they could sell their services; they were therefore in a weak bargaining position on price and were vulnerable to manipulation by ES buyers (Baumann 2000). The findings also demonstrate that poor households have limited knowledge about PES and very limited experience in or knowledge of project monitoring.

Building capacity for the poor is essential to enhance their involvement in PES schemes. However, this is not enough. This study, as with others (eg, Shankland 2001; Blagescu & Young 2006), found that organisational and political capacities need to be strengthened, as well as the capacities of individuals.

Existing Local Institutions can Help the Poor Participate in PES but they Need to be Accountable

Existing local organisations can play a crucial role in the process of establishing PES (Vatn 2010; Pham, et al 2010). Local institutions can demystify PES and help communities and poor households to address challenges and assist in negotiating more favourable terms in PES agreements. They can also be important for facilitating collective action to assist smallholders to compete against larger service providers in national or global markets (Milder, et al 2010). While in theory PES is a market solution to environmental problems as an alternative to state (hierarchical) and community regulations, PES in practice depends fundamentally on state and/or community engagement (Vatn 2010), particularly in countries like Vietnam where the government owns the land and has a pervasive influence at all levels of society.

There is a danger that PES may reinforce existing inequalities. The process of production, exchange and consumption of ecosystem services is characterised by power asymmetries which may contribute to reproducing rather than addressing existing inequalities in access to natural resources and services (Kosoy & Corbera 2010). Local political influences and vested interests can easily influence the selection of projects, investment and procurement decisions, and the degree to which local people are either involved in or excluded from these decisions (Shanks, et al 2003). The cases highlight the negative impact that the village head can have on the selection of project participants. A concentration of power in the hands of a small clique of commune officials and well-connected individuals who dominate associational life can exclude members of the community and undermine the interests of the poor (Shanks, et al 2003). The manner in which such institutions are structured and made accountable to the community needs

to be carefully analysed if negative impacts on the poor are to be avoided. PES project designers should not try to take shortcuts by choosing existing institutions without analysis. They must be clear about the objectives and operations of these associations or networks to ensure the trust of the poor is not misplaced.

PES Project versus Traditional Development Project

Neither of the PES cases investigated reduced poverty. This poses a question about how beneficial a PES project might be versus a more traditional poverty alleviation or development project, particularly in terms of transaction costs for donors. On the one hand, PES has gained increasing attention from donors as a means of protecting the environment and improving the livelihoods of people. On the other hand, PES schemes can be more expensive to administer and potentially less effective than, for example, a traditional agricultural extension project. Both donors and PES designers need to take this into account when considering potential scheme impacts on the poor.

Conclusions

With increasing attention and interest in PES at both global and national levels, along with the interest of donors in including poverty reduction as a core project objective, poor households do have opportunities to participate in PES schemes. In Vietnam, the private sector is motivated to work with small and poor households in order to obtain government support via financial credit. This provides opportunities for poor households to enter the ES market, generate additional income, obtain technical assistance, and achieve some improvements in the transfer of knowledge and technology. However, it is necessary to recognise the organisational and institutional constraints that limit poor household participation in PES, including buyers often being favoured over sellers by the government, contract compliance difficulties, contracts which favour wealthy buyers not poor sellers, and the limited ability and capacities of poor households to negotiate terms and conditions in their favour. The extent to which PES schemes can address poverty depends on a number of factors, especially the scope of the project, the political, social and economic context of the project, and the local definition of poverty. Capacity building for poor households, awareness raising for policy makers and buyers, better coordination for more transparent and equitable benefit sharing and monitoring, and the availability of trusted intermediaries all need to be ensured if poor households are to derive benefit from pro-poor PES.

Notes

1. Opportunity costs of participation are the difference between the returns poor ES providers gain from their current activity and the costs or forgone benefits of adopting new management measures needed to participate in a PES scheme (FAO 2008).
2. Transaction costs concern both the setting up of the system and its operation (Vatn 2010).
3. This is the legal right to use and derive profit or benefit from property that belongs to another person as long as the property is not damaged (CAPRI 2010).

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Pham Thu Thuy is Research Fellow, Forests and Governance Programme, Center for International Forestry Research, Vietnam; Stephen Garnett is Professor, and Heather Aslin is Senior Research Fellow, in the Research Institute for the Environment and Livelihoods, Charles Darwin University, Australia.

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