

Payments for forest environmental services in Vietnam

From policy to practice

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1. Introduction

The basic idea of “payments for environmental services”, or PES, is to create incentives for individuals and communities to protect environmental services by compensating them for any costs incurred in managing and providing those services. In 2004, the government of Vietnam, drawing on the concept of PES, laid the foundations for a nationwide program of Payments for Forest Environmental Services (PFES), set out in the revised Forest Protection and Development Law. In 2008, Decision No. 380 established conditions to support PFES pilot projects in Lam Dong and Son La Provinces, and in 2010, Decree No. 99 mandated the implementation of PFES nationwide. Vietnam is the first country in Asia to initiate a nationwide PES scheme.

The goals of the PFES program in Vietnam are to improve forest quality and quantity, increase the forestry sector’s contribution to the national economy, reduce the state’s financial burden for forest protection and management, and improve social well-being. To date, however, there has been no comprehensive review or analysis of the program or of its progress toward achieving these goals.

This policy brief draws on a study that assessed PFES implementation since 2008 with the aim of providing practical policy recommendations for achieving effective, efficient and equitable outcomes. The full

study focuses on three aspects of PFES: (1) institutional setting (rules of the game and organizational arrangements); (2) benefit-sharing mechanisms (distribution of payments among suppliers and participation in processes); and (3) monitoring and evaluation (monitoring of environmental services, contracts, financial flows and social impacts).

First, a review of the literature was undertaken to understand the institutional setting and the state of PFES implementation in Vietnam and to identify lessons learned from past experiences, both in Vietnam (in relation to PFES) and in other countries (in relation to PES more generally). Then, 210 semi-structured interviews were conducted with representatives of central and local authorities, research institutions, donor agencies, nongovernmental organizations, civil society organizations, and buyers and suppliers of environmental services. Case studies in Bac Kan, Son La, Hoa Binh, Nha Trang, Nam Dinh, Thua Thien Hue, Quang Nam, Dak Nong and Lam Dong Provinces were used to identify key lessons. In addition, two technical seminars were held to elicit comments from experts, policy makers and managers on the findings of this review.

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2. Major achievements of Vietnam's PFES program

The government of Vietnam has made a strong commitment to PFES. Twenty legal instruments — Decrees, Prime Ministerial Decisions and Circulars — form the legal basis for PFES implementation. Of the four environmental services listed in Decree 99 (see Section 3), the PFES program for watershed protection services has the most advanced legal setting and offers the most useful lessons.

The operation of PFES relies heavily on Forest Protection and Development Funds (FPDFs), established at both central and provincial levels. As of December 2012, 35 out of the 63 provinces in the country had established a steering committee to oversee the implementation of PFES, in accordance with legal requirements; 27 of those provinces are also managing a provincial FPDF. With this government support, PFES implementation (2009–2012) has resulted in stronger capacity of government agencies and greater public awareness of the role of forest and forest protection and development. In addition, the scheme has generated total revenue of VND 1,782 billion (about USD 85 million); of this sum, payments from hydropower plants account for nearly 98%, water companies for about 2% and tourism for 0.1%. Overall, PFES revenue represents 0.8% of the national forestry budget.

3. Key findings on the institutional setting

A general legal framework is in place.

Since 2008, the national legal framework for PFES, the institutional setting, organizational arrangements, and contractual and financial management regimes of the program have been refined through 20 legal instruments issued at different levels of government (four Decrees and Prime Ministerial Decisions, 16 Decisions and Circulars). Five legal instruments provide guidance on the establishment, organization and management of FPDFs at national and provincial levels, and 11 provide general guidance on payments for watershed protection and landscape beauty services.

Provincial FPDFs dominate the institutional setting for PFES. Provincial FPDFs sign contracts with buyers of environmental services and collect payments. They also prepare payment plans, monitor and release payments to service suppliers, and submit periodic reports to the central Forest Protection and Development Fund. Service suppliers are individuals, households, communities or organizations that have been verified by the provincial FPDF as having land-use right certificates. Buyers, as defined in Decree 99, are water supply companies, hydropower plants and tourism companies, all of which can pass on their PFES fees to end users (the public).

Only two of the four officially targeted environmental services are subject to payments because institutional arrangements and clear guidance are lacking.

Following are the four environmental services set out in Decree 99:

- (i) watershed protection (including soil protection; reduction of erosion and sedimentation of reservoirs, rivers and streams; 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 forest sustainable development
- (iv) provision of spawning grounds, sources of feeds and natural seeds, and use of water from forest for aquaculture.

Vietnam's Ministry of Agriculture and Rural Development (MARD), which is responsible for implementing PFES, has issued clear guidelines and procedures for the implementation of watershed protection and landscape beauty services only. Buyers of these services must pay a fixed payment, of 20 VND/kWh produced for hydropower plants, 40 VND/m³ of clean water produced for water supply companies and 1–2% of gross revenue for ecotourism companies. To calculate the per-hectare payment received by service suppliers, the sum after the management fee (10% of total gross revenue)

and reserve fund contribution (5%) have been deducted is divided by the number of hectares in the forest area under contract to provide environmental services.

Although the program is underway for the landscape beauty and biodiversity service to some extent, tourism PFES is difficult to apply and controversial because of the wide range of stakeholders, types of operations and complicated supplier–broker–buyer relationship. Persevering with developing compliance mechanisms and protocols for bringing this environmental service fully into the program could be rewarded by substantial revenues, which could then be used to support the maintenance of landscape beauty and biodiversity across the country. To date, challenges with implementation include the following:

- Buyers do not fully appreciate how landscape beauty contributes to their business.
- The willingness to pay of buyers of environmental services in the tourism industry differs according to their turnover (the higher the revenue, the higher the willingness to pay).
- It is unclear which sectors in the tourism industry should be paying for the service. Collecting PFES fees from some commercial tourism companies is difficult because they wield considerable political power, which enables them to lobby local authorities so they can avoid paying the fee, and because their accounting systems tend to lack transparency (e.g., unclear bookkeeping, no public disclosure of the revenues of large companies, no bookkeeping by smaller enterprises such as homestay accommodations).
- There are wide discrepancies in the payment calculations; for example, some are calculated based on revenue from entrance fees whereas others are based on overall revenue.

Although many donor-supported pilot activities related to the other two services, carbon sequestration (e.g., in Lam Dong and Nghe An Provinces) and spawning and aquaculture (e.g., Xuan Thuy National Park, Ben Tre and Ca Mau Provinces), are underway, it is too soon to obtain clear results. MARD has suggested to the Prime Minister that these pilot activities continue for another 2–3 years so that the results can inform the design of formal procedures and steps to apply the PFES scheme

nationally for these environmental services. Forest carbon sequestration services are tied in with reducing emissions from deforestation and forest degradation (REDD+), for which the government has approved a national action plan as the basis for reducing greenhouse gas emissions from forestry. In addition, with the support of the UN-REDD Programme, Vietnam has completed the first phase of REDD+ (“readiness”) and is moving into the REDD+ pilot phase (2013–2016), during which the criteria and payment scheme for carbon sequestration will be tested, with the results to be used to inform the development of legal frameworks for payments for this service. MARD has not yet determined how best to link PFES and REDD+ and is assessing various mechanisms for beginning payments for carbon sequestration services. Results on PFES payments for spawning and aquaculture services are still pending, as MARD, with support from GIZ (German Agency for International Cooperation), IUCN (International Union for Conservation of Nature) and CIFOR (Center for International Forestry Research), is testing various policy and payment options, based on revenue, cost–benefit ratio (total present value of benefits to total current costs), fixed payments, forest area–based payments, volume of water used and certification.

The average disbursement rate of PFES revenues is low.

Overall, FPDFs have disbursed to service suppliers only 46% of the total revenues collected to date. This low disbursement rate has been attributed to the following factors: incomplete forest inventory, the slow process of land allocation, the large numbers of individual suppliers of environmental services (who are often scattered and in geographically isolated areas), weak technical and financial capacity at both central and local levels, and weak coordination among agencies. Prioritizing technical support for improving data on forest areas, forest quality and legal forest managers is a necessary step for the efficient and effective implementation of PFES. Stakeholders in the PFES scheme would also benefit from training that explains the benefits of forest protection and reveals the potential value of PFES payments for improving their livelihoods. Additional guidance on how to use undisbursed PFES funds and systematic internal or third-party monitoring of financial transactions might help to accelerate the disbursement rate.

Transaction costs are high.

Transaction costs tend to be high because of the large number of forest owners, the complexity of administrative structures, the limited capacity of public servants, conflicts of interest, and weak coordination and information sharing between and within government agencies. One option for reducing transaction costs would be to group individual households in a region into groups. Engaging banks might be of value in areas with high population density, although working with the Social Policy Bank in Son La Province was not effective because individual service suppliers were scattered, bank staff visited suppliers infrequently and payments were small. Use of mobile phone technologies could also be considered.

Local communities have become discouraged about forest protection and development because they do not have legal status to enter into PFES agreements.

Under Decree 99, only those with a land title, whether households, communities, state-owned companies or private companies, are eligible to receive PFES payments. Community forestry is a successful model for forest protection and development (as seen in, for example, Son La Province). The legal status of communities has varied over time: the 2004 Forest Protection and Development Law states that communities are legal subjects that can manage and protect forests, whereas under the 2005 Civil Code, communities are not considered legal entities that can enter into civil contracts. The unclear legal status has caused local communities to become discouraged about forest protection and development. One option would be to require communities to register as a "Forest Cooperative", as occurred in a case in Thai Nguyen Province.

Buyers and suppliers are not well defined.

The PFES system does not clearly define what is a "buyer" or a "seller". Buyers, which according to Decree 99 are water supply companies and hydropower plants, actually simply pass their PFES costs on to the end user. The companies, therefore, are effectively brokers and the public are the real buyers in the PFES system, although they are

unaware of this fact. As water supply companies and hydropower plants do benefit from the protection of forests and watershed protection, especially from less sedimentation of their reservoirs, they should be expected to pay for these environmental services as a cost of doing business. Identifying buyers, raising awareness among the public and buyers of how PFES can benefit their health and welfare, and inviting buyers to participate in the development of PFES could all help strengthen the program.

In many cases, such as national parks and the service of landscape beauty and biodiversity conservation, buyers are also suppliers; this complicates the PFES scheme. Although both commercial tourism companies and national park and protected area authorities are carrying out tourism-related enterprises, the debate on tourism PFES at the central level is limited to national parks and protected areas, which are important for tourism PFES. As GIZ and tourism companies in Lam Dong have pointed out, the role of protected area and national park authorities in the payment process is unclear and can vary, depending on how the PFES scheme is set up. National park and protected area authorities and forest organizations are established in law as forest managers; as such, they are seen as a type of supplier of environmental services and are entitled to receive PFES payments. At the same time, they derive benefits from running tourism activities, which makes them also buyers of environmental services. In addition, as they often contract households to protect forests, they also function as intermediaries or brokers, channeling PFES payments to forest managers; fulfilling this intermediary role entitles a park to keep 10% of the PFES payment to cover its management costs. It is therefore important to balance the benefits that national parks gain for the services they sell with the payments they should be entitled to receive as suppliers of an environmental service.

In all cases, buyers, sellers and brokers should be exchanging information regularly to ensure transparency of the system. Developing an information-sharing system is essential to connect PFES suppliers and buyers and ensure full community engagement in the program.

Private sector buyers are at a disadvantage compared with state-owned companies.

When Decree 99 was passed in 2010, private hydroelectric plants were already under contract with Vietnam's national electricity company to supply electricity at fixed rates. As a result, they were not allowed to pass on their PFES fees to end users, as state-owned companies could. Although this issue was resolved in 2012, it remains unclear whether or by what mechanism private companies will be compensated for the PFES fees they absorbed into their business costs in 2010–2011. Similarly, many water supply companies and tourism companies cannot pass on the PFES fees to end users. As a result, companies have different cost burdens.

PFES in Vietnam may not be a true PES scheme — but does that matter?

PFES schemes in Vietnam deviate from classic definitions of PES in that the level of payment is set by the government rather than being a voluntary transaction between buyers and suppliers; as such, PFES payments effectively function as a water and electricity use fee or tax. However, the discussion should focus not on whether PFES policies in Vietnam are truly "PES" but rather on whether Vietnam's PFES policies have a clear and coherent legal framework that can ensure good governance in public PFES schemes.

4. Key findings on benefit sharing

The level of PFES payments is low but opportunity costs are high.

A recurring threat to the PFES scheme for watershed protection services is the high opportunity costs of converting forest to other land uses. PFES payments are too small to cover the forgone economic gains from clearing forest, specifically conversion to maize or coffee or of mangrove forests to shrimp farms. One option could be to combine PFES with other forestry or economic support programs to channel more sources of funding for forest protection initiatives. Combining direct cash payments with nonmonetary program benefits, such as increased education and capacity building in communities or initiating programs that could alleviate poverty

over the long term, may increase community commitment to PFES, even in the case of low payment levels.

Trade-offs between effectiveness, efficiency and equity are necessary.

The present benefit-sharing mechanism is designed to meet local expectations and ideas of equity, namely that everyone should be paid the same regardless of their legal, social or economic status and regardless of the condition of the forest they are paid to conserve. To this end, the system does not account for forest quality (K factor). However, this approach does not create incentives to protect the forest or enhance its quality, which renders it ineffective. In addition, each household receives only a small PFES payment because they manage only a small area of forest (as seen in Son La), which renders the program inefficient. Accounting for forest quality and using group contracts rather than individual contracts would improve program effectiveness and efficiency.

PFES payments are calculated at a per-hectare rate: the total PFES fee paid by buyers of environmental services is divided by the total area of forest protected (in hectares). Using this method of calculation, watersheds with a higher percentage of forest area receive a smaller PFES payment per hectare, and watersheds with a lower percentage of forest area receive a larger PFES payment per hectare. Although the larger payments create a greater incentive for forest protection in areas with less forest, the smaller payments stimulate land conversion in areas with more forest. Either way, buyers of environmental services gain little value from PFES because they pay the same rate regardless of the condition of the watershed. This finding suggests that PFES could be combined with other conservation programs to enhance overall watershed protection. Some of the policy options worth considering are as follows:

- Evaluate the payment rates for buyers, and compare the current fixed rate with an adjustable rate based on a percentage of the revenue earned from the supply of power or water (similar to the approach used in charging tourism companies).

- Determine whether payment rates should be based on the percentage of watershed that is forested.
- Direct PFES funding to key areas that supply specific environmental services. For example, forests adjacent to streams could receive a higher level of payment for watershed protection than forests at a greater distance, or forests with high biodiversity value could receive a higher level of payment for landscape beauty and biodiversity services than forest areas that do not supply these services.
- Use some of the fees collected, or pair PFES with other government programs, to improve the overall health of watersheds, for example by restoring forests or applying soil and water best management practices in other land uses to reduce erosion and sedimentation.

Lack of detailed guidelines on how to use the money received from PFES can open the way for corruption in villages and communities

There is little guidance on how provincial FPDFs, communities or village management boards can spend PFES revenue, and suppliers of environmental services are not included in spending decisions. The lack of any oversight mechanism in villages and communities makes it possible for local authorities to misuse PFES revenues. A model of a multi-stakeholder trust fund, with representatives of buyers, suppliers, nongovernmental organizations, academia and government agencies, was trialed in Hoa Binh and a cooperative model was tested in Thai Nguyen. These models earned the trust of both buyers and suppliers of environmental services, and should be used in the PFES program across the country. In most cases, suppliers of environmental services have expressed a preference for both cash and in-kind payments, such as education and capacity building. In some cases, the Commune People's Committee has also taught villagers ways to maximize their payments and use them to improve their socioeconomic conditions. Suppliers of environmental services thus require assistance in optimizing the use of their PFES money, although any guidelines should be flexible enough to allow suppliers to adapt them to their local context and employ a multi-stakeholder decision-making panel.

5. Key findings on monitoring and evaluation

The PFES program does not include a clear monitoring and evaluation system.

Most of the policy guidelines on PFES focus on the institutional setting, the operation of the FPDFs and financial reporting, but the government has provided no clear direction on monitoring and evaluation. The current guidelines are highly ambiguous, so local authorities may either interpret them too freely or resist doing anything out of fear of making mistakes. Monitoring and evaluation programs could range from simple to sophisticated, depending on the financial and technical capacity of the particular provincial FPDF. A simple monitoring design might be appropriate initially, looking only at the inputs and on self-reporting. By the fifth year of a program, however, monitoring activities should be well documented and sufficient to demonstrate any progress toward achieving positive socioeconomic and environmental outcomes. A monitoring program should cover baseline setting, monitoring of PFES program inputs and setting target outcomes. A key component of any monitoring and evaluation system is to use information gained through open dialogue and feedback from stakeholders to continually refine the process and improve both the policy and delivery system to achieve the desired outcomes.

No clear environmental or socioeconomic baselines have been established.

Although Vietnam conducts a nationwide forest inventory, provincial forestry department officials claimed that the available data are not sufficient to delineate forest areas or assess forest quality at the local level. Also lacking are photo-based maps and/or boundary markers in the field showing the borders around the land over which people have tenure. Images from satellites, Google Earth or other technologies would be useful in obtaining this baseline information, which is essential for numerous programs underway or proposed in Vietnam, including REDD+. Organizations should work together to obtain the baseline data so that all projects and programs are using the same information when assessing their own effectiveness.

Likewise, all agencies involved in monitoring social and economic impacts should work together to set the baselines for communities engaged in the PFES program. This initial assessment can then be used as a benchmark for evaluating the benefits of PFES in conjunction with or separate from other programs.

Transparent monitoring of PFES contracts, financial flows and grievances is needed.

Core steps in PFES implementation are identifying buyers and sellers, developing and monitoring contracts, and ensuring proper distribution of revenue. Although Decree 99 identifies some buyers of environmental services, its list is not exhaustive and a strategy to identify more buyers is needed.

Transparency must be embedded in all steps, from drawing up contracts to verifying compliance to receiving and distributing payments. Internal checks or multi- or third-party monitoring would boost the accountability of the system. In addition, changes must be made to the current grievance mechanism, as many PFES participants — that is, local suppliers of environmental services — cannot fully access it for various reasons: because they do not understand the system, they do not know their rights, they cannot read or write or their village leader does not forward their concerns to higher-level officials for resolution. A process for handling grievances in which people's complaints are addressed in a timely manner and without fear of reprisals needs to be established and monitored.

In addition, delays in verifying and distributing payments create mistrust among both buyers and sellers, which is likely to reduce their engagement in the program. The following weaknesses in enforcing PFES contracts were identified:

- shortage of human resources and staff capacity in local government departments
- insignificant penalties for illegal activities
- lack of an authority for enforcing compliance
- absence of a functional grievance-handling system.

Monitoring is generally based on reports by individual landowners, which tend to be biased and inaccurate. Without strong law enforcement,

buyers become less willing to pay for services, which diminishes the program's effectiveness. All of these issues need to be addressed to improve PFES program delivery.

Monitoring of the environmental and socioeconomic impacts of PFES needs to be strengthened.

According to Decree 99, PFES payments should be calculated based on both forest quality and quantity; in reality, however, forest area is used as the main proxy to monitor all other environmental services. Forest owners self-report the status of the forest area they are contracted to protect, with 10% of their contracted forest area subject to a validation check by forestry department staff in the case of any disputes. Given its lack of transparency and quantitative records, this monitoring system cannot demonstrate whether environmental services are being properly provided. Use of remote sensing technology and field verification could support these goals.

Although the core aim of PFES is to protect forests, developing a more holistic program would help support the full delivery of environmental services. In particular, PFES could be paired with complementary conservation and socioeconomic programs to optimize its outcomes. For example, protecting existing forest alone cannot resolve the erosion and sedimentation problems facing hydropower plants and water supply companies because the erosion is caused by land uses, such as agriculture and roads, that are of socioeconomic benefit to communities in non-forested areas. The government could consider sponsoring soil and water conservation programs that would support these land uses while protecting the watersheds.

Findings on the social impacts of PFES are mixed, and credible data showing PFES as having a positive impact on local incomes are lacking. PFES payments might be too low and insignificant to improve local livelihoods, especially where the opportunity costs are high. This limitation calls for the introduction of a multi-agency and multi-stakeholder approach to monitoring the socioeconomic impacts of PFES.

6. Conclusion

PFES is a major breakthrough for Vietnam's forestry sector and it underwent numerous refinements and improvements during the pilot phase. In particular, major achievements have been made in establishing legal frameworks and institutional arrangements, generating substantial revenue, and gaining political commitment and interest in supporting PFES at both central and provincial government levels and among local people, all of which suggest a bright future for PFES.

For PFES to have outcomes that are effective, efficient and equitable, however, policy makers need to work toward developing a functional monitoring and evaluation system, with an accessible grievance mechanism, to ensure transparency and

accountability in the distribution of PFES revenues from central to local levels. PFES could also benefit by being part of a more holistic program, working with complementary conservation and socioeconomic development programs. PFES program delivery would be further supported by long-term capacity building for government staff and households, communities and their representatives.

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