



Forest land allocation and payments for forest environmental services in four northwestern provinces of Vietnam

From policy to practice

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List of abbreviations

| | |
|-------|---|
| 5MHRP | Five Million Hectares Reforestation Program |
| BSM | benefit-sharing mechanism |
| CDM | Clean Development Mechanism |
| CIFOR | Center for International Forestry Research |
| CPC | Communal People's Committee |
| D&D | deforestation and forest degradation |
| DARD | Department of Agriculture and Rural Development |
| DONRE | Department of Natural Resources and Environment |
| ES | environmental services |
| FLA | forest land allocation |
| FMB | Forest Management Board |
| FPD | Forest Protection Department |
| FPDF | Provincial Forest Protection and Development Fund |
| GIS | geographical information system |
| GSO | General Statistics Office |
| HH | household |
| JICA | Japan International Cooperation Agency |
| M&E | monitoring and evaluation |
| MARD | Ministry of Agriculture and Rural Development |
| MONRE | Ministry of Natural Resources and Environment |
| ND | National Decree |
| NP | national park |
| NR | nature reserve |
| NTFP | non-timber forest product |
| PES | payments for environmental services |
| PFES | Payments for Forest Environmental Services |
| PPC | Provincial People's Committee |
| QD | Decision |

| | |
|----------|--|
| REDD+ | Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries |
| USD | United States Dollar |
| VAFS | Vietnamese Academy of Forest Sciences |
| VND | Vietnamese Dong |
| VNFF | Vietnam Forest Protection and Development Fund |
| VNFOREST | Vietnam Administration of Forestry |

Executive summary

This report is an output from a joint collaborative project between the Center for International Forestry Research (CIFOR) and Japan International Cooperation Agency (JICA). The objective of the study is to assess the current status of forest land allocation (FLA) and Payments for Forest Environmental Services (PFES) in four northwestern provinces of Vietnam: Son La, Dien Bien, Lai Chau and Hoa Binh. The paper also aims to identify opportunities and constraints for FLA and PFES implementation and highlight policy and research gaps and for future FLA and PFES improvement. A literature review and in-depth interviews with 27 key informants in four provinces were conducted. The study is also built on CIFOR's research findings on PFES in Son La and Dien Bien (Pham et al. 2013; Pham et al. 2014; Le et al. In press).

i. The status of FLA: The opportunities and challenges for FLA and their impact on forest protection and development, local livelihoods and PFES

According to the Sub-FPD statistics for 2014, unallocated lands in the study provinces are as follows: Dien Bien: 82%, Son La: 25%, Lai Chau: 8% and Hoa Binh: 5%. However, FLA has been nearly completed and all forest managers were given land-use right certificates in Hoa Binh and Son La provinces while incomplete and slow progress of FLA was observed in Dien Bien and Lai Chau provinces. Among the four provinces, forest lands were mostly allocated to communities and households in Hoa Binh (and probably Dien Bien once the remaining allocation has been completed). In Lai Chau, Forest Management Boards (FMBs) are currently managing 42% of the province's forests. Forest owners were allocated production and protection forest.

These four provinces share common problems in implementing FLA such as: (i) poor database management; (ii) inconsistent data between demarcation of the area and the area registered in the land-use certificate; (iii) inconsistent data between DONRE and DARD due to varying land-use classification systems; (iv) out-of-date data; and (v) a lack of human resources and political interest in enforcing FLA in highly contested areas. There are overlaps among allocated areas for Forest Management Boards (FMBs) and households, leading to land conflicts. All of these above factors have led to slow progress in PFES disbursement and difficulties in ensuring proper monitoring and evaluation of PFES outcomes.

Despite sharing common challenges, each province must confront certain barriers. In provinces where FLA has been nearly completed according to their claims (i.e. Son La and Hoa Binh), individual households are allocated a number of scattered but small forest areas (from a few hundred m² in Son La, a few thousand m² in Hoa Binh to 3000–4000 m² in both provinces) leading to high transaction costs in disbursing PFES payment and monitoring environmental services (ES). This also leads to low PFES payment levels to these households, low willingness of farmers to participate in the PFES scheme, fewer incentives in reducing forest conversion into cash crops and hence limited impact of PFES on environmental outcomes. Grouping individual households to enhance collective action in forest management, reduces transaction costs and increases the effectiveness of PFES payment which are seen by Son La and Hoa Binh as provincial priorities. The feasibility of this option depends on the interest and willingness of local people. In Hoa Binh, for instance, individual households are not willing to give up their rights and ownership over their production forest land to join forestry groups. In contrast, in Son La, local people are more willing to participate in

forest cooperatives rather than in managing small forest land areas. Moreover, provincial interests in promoting and supporting drivers of deforestation such as orange farm development in Hoa Binh and mining in Dien Bien and Lai Chau also further complicate the FLA process. For example, in Hoa Binh, the expansion of orange farms is supported by provincial authorities and has also resulted in more conversion of forests. In provinces where FLA is still incomplete according to their claims (Dien Bien and Lai Chau), provincial authorities are waiting for 2015 national forest inventory and statistics results to accelerate the process.

At the time the survey team visited the provinces, the allocation survey had been completed for the remaining forest land and these authorities were waiting for verification and decisions. However, contested area between FMBs and households who both had land-use rights certificates, migrants and local people and customary rights and formal rules were still seen by provincial authorities as major challenges.

The interviewees identified potential risks associated with current FLA in the four provinces as: (i) the interest of private companies and forest protection management boards to retain forest land; and (ii) overlaps in areas under land-use right certificates between local communities with national parks and FMBs on the same land, causing difficulties in both benefit distribution and monitoring ES.

ii. The status of PFES – the opportunities and challenges for PFES implementation

Among those four provinces, Son La has the longest PFES implementation experience (payment distribution started in 2009). Hoa Binh and Lai Chau started to distribute PFES payments in 2012 and Dien Bien started in 2013. Annual PFES revenue in 2014 was VND 211 billion in Lai Chau, VND 192 billion in Dien Bien, VND 110 billion in Son La and VND 11 billion in Hoa Binh. The average unit payment levels also vary among these provinces: VND 439,000/ha/year in Lai Chau, VND 281,000/ha/year in Dien Bien, VND 220,000/ha/year in Son La and VND 162,000/ha/year in Hoa Binh.

The institutional setting for PFES in the four provinces depends on the PFES revenue generated as well as political will and support. In Son La, Dien Bien and Lai Chau where PFES revenue is large (> VND 100 billion/year), political interest and support for PFES are high and the Provincial Forest Protection and Development Fund (FPDF) acts as independent department under DARD with more than 10 full-time staff. In Hoa Binh where the PFES revenue is relatively small (about VND 11 billion/year), provincial political interest and support are limited. Moreover, Hoa Binh FPDF is established under the Provincial People's Committee (PPC) with only five full-time staff and five part-timers. At district level, only Son La has set up district PFES management boards with full-time staff; the other three provinces use the existing government structure such as FMBs to channel PFES payment to the final beneficiaries.

While Hoa Binh FPDF takes on a passive role in implementing PFES as Decree 99 instructs, Son La, Dien Bien and Lai Chau FPDFs take a more active role in developing their own provincial policies in relation to PFES policies. These provincial policies focused on two areas: (i) the benefit-sharing mechanism; and (ii) the institutional settings for PFES management at district and commune levels. The critical area for PFES implementation consists of law enforcement for late payees and clear guidance on monitoring and evaluation. However, there is a conflict of interest and different views on law enforcement applied for buyers (e.g. hydropower plants) and sellers (e.g. local communities and ethnic groups). In all four provinces, the maintenance of private sector investment in the province and of social stability, have impeded strict law enforcement in both groups.

Four provinces also have different views, focus and interests in ES as well as policies associated with each service. Among the four provinces, only Hoa Binh includes all four ES listed under Decree 99 while Lai Chau prioritizes watershed protection services for hydropower plants. In addition, Dien Bien and Lai Chau are considering water supply companies and tourism activities although their contribution is minor compared with that of hydropower. Among these four provinces, only Hoa Binh FPDF encourages the direct payment

method applied for landscape protection, in which service users negotiate and directly send their payments to service providers without going through the FPDF, while the other three provinces only expressed interest and support for indirect payment.

Circular 24/2013/TT-BNNPTNT (dated 6/5/2013) regulates that organizations, individuals and projects converting forest lands for non-forestry use purposes (e.g. hydropower dams) have to: (i) reforest the same area by themselves; or (ii) pay compensation to FPDFs for reforestation. Among these four provinces, Dien Bien and Lai Chau have received compensation in the last 2 years, while Hoa Binh has received compensation only since the beginning of 2016. Yet, having additional revenue from this source of funding is seen as *ad hoc* and high-transaction-cost business by both Dien Bien and Hoa Binh FPDFs.

Among these four provinces, only Dien Bien has produced a Provincial REDD+ Action Plan. However, There is skeptic about REDD+ (in Dien Bien as well as in the other three provinces) and have limited interest in developing REDD+ due to uncertainty about the financial benefits that can be generated from REDD+ activities. Among these four provinces, only Hoa Binh has highlighted the need to treat PES and REDD+ as a part of the Provincial Forest Protection and Development Plan. The other three provinces stated that they would treat PES, REDD+ and the Provincial Forest Protection and Development Plan as separate programs. The interviewees also highlighted the issue of weak coordination among different government agencies.

Payment distribution and benefit sharing varies from province to province although they do all share common socio-physical conditions. At provincial level, only the Lai Chau FPDF has a surplus budget for its operational costs generated (VND 20 billion/year) thanks to the large amount of payment from hydropower plants and the small number of forest owners, i.e. fewer transaction costs. The FPDFs in the other three provinces have insufficient budgets for their operation due to the large number of small and scattered forest owners (e.g. in Son La) or the small amount of payment from service users (e.g. in Hoa Binh). As a result, only Lai Chau has used its management fee for a wide range of purposes, e.g. support for new

livelihood models and provincial infrastructure development (20% of the total management fee).

There are five payment modalities applied in these four provinces: (i) payment to groups of households (10–15 HHs) (all four provinces); (ii) payment to village heads acting on behalf of villages (Hoa Binh, Son La and Dien Bien); (iii) payment to communities (Son La, Dien Bien and Lai Chau); (iv) payment to FMBs (all four provinces); and (v) payment to private companies (Son La and Lai Chau). The level of payment for these entities is also varied, leading to different impacts of PFES within and among provinces. Even in the case of PFES payment to communities/villages, only Son La and Dien Bien had a significant amount of payment for a small number of villages. In the other two provinces, most of the villages received a very small amount of payment ranging from a few thousand VND in Hoa Binh to a maximum of several million VND in Lai Chau.

In all four provinces, K factors (K1, K2, K3 and K4) are seen as costly and unrealistic due to the large amount of technical work needed for measurement and verification. As a result, all four provinces apply only K3 (forest origin: natural forests or plantation).

The frequency of the payment also varies from province to province, ranging from once per year in Son La and Hoa Binh due to high transaction costs for distributing payments to a large number of forest owners to twice per year in Dien Bien and Lai Chau – as there are advance requests from forest owners and pressure from VNFF (the central fund) on FPDFs (the provincial funds) to disburse the payments on time.

The question over who should be eligible to receive PFES has not received enough attention from these four provinces, but it will need to be addressed to ensure the effectiveness of PFES. For example, according to the provincial authorities interviewed in Dien Bien and Lai Chau, the main driver of deforestation and forest degradation in these two provinces is shifting cultivation caused by migrants from other provinces and landless poor ethnic groups. Yet, both FLA and PFES currently target only stakeholders who have local residency (for FLA) and land-use rights certificates (for PFES). In Lai Chau, local minority populations and migrants

sent a proposal to the FPDF, which requests the PFES payment to those populations on condition that they stop shifting cultivation – the proposal was considered and approved by the FPDF. In the other three provinces, legal rights (forest land allocation) are still prerequisite for PFES payment.

In case communities are forest owners, another question is how the monies are used/shared within these communities. In the current setup, once the payment is delivered to communities, communities can decide how these monies should be used or shared among their members. There is no national guidance as to how these payments should be used/shared within these communities.

Among the four provinces, only Son La has issued detailed guidelines on how PFES money should be distributed at different levels and within the community/village with a specific benefit-sharing ratio. The Son La PPC guidelines require that a maximum of 40% of the payment made to a community should be used for a forest protection team and the remaining amount should be used for community/communal purposes. Dien Bien has issued clear guidelines as to how payments to villages and communities should be recorded and reported.

Previous CIFOR studies pointed out that payments to communities are usually used/shared in the following ways: (i) equal distribution among members; (ii) community infrastructure development; (iii) small-scale loans; (iv) payment to village forest protection groups; and (v) saving in community funds (Pham et al. 2014; Le et al. In press).

CIFOR studies also identified seven key factors that influence local people's decisions on payment distribution:

- Access to market and existing infrastructure
- Level of incomes
- Level of trust in and capacities of financial management of local authorities and villagers
- Existence of strong collective action and customary law
- Local perceptions on equity
- Size of payment
- Financial management skills of villagers

Local people's preferences as to how payments are used/shared and their ability to influence spending

decisions can shape the scheme's effectiveness in achieving forest management and poverty reduction goals.

Monitoring and evaluation. The monitoring and evaluation of PFES performance in all four provinces only stops at monitoring forest area over time as regulated in Circular 20. Monitoring forest quality and social impact is absent in all four provinces. The current environmental impact of the PFES program is defined on the reduction of forest fires and violations and an increase in forest cover. Yet, these parameters do not help these authorities to understand the reasons that led to these improvements. For example, in Hoa Binh, the informants highlighted that the reduction of forest fires and forest violations were mainly due to poor conditions of forests, i.e. there was nothing left in these poor forests, and not because of stricter law enforcement and heavy penalties. However, these improvements had limited correlation with PFES due to the low level of payments. The interviews with the FPDFs in all four provinces revealed that there had been no assessments on the impacts of PFES on livelihoods and income of local households in PFES areas. The impacts on local livelihoods are mixed and differ from province to province. In some areas, payment levels have been too low, creating limited impacts on local livelihoods (e.g. VND 13,900/ha for 2013–2014 in the Ma River watershed in Son La). In contrast, the PFES scheme has greatly contributed to communal development of some villages such as construction of village cultural houses, village roads and others in Son La.

iii. Equity consideration in FLA and PFES

In Dien Bien, a respondent sees migration (including that due to resettlement from dam construction sites in Son La and Hoa Binh) coupled with shifting cultivation as the main drivers of deforestation and forest degradation. Yet, these communities and households are not allocated any forest or agricultural land and are not eligible to receive PFES payments to change/stop their activities impacting the forest. This respondent regards FLA as an equitable and efficient way to stop deforestation and forest degradation, but it also raises another equity question – Are existing communities, with already limited forest land areas, willing to share their

land with outsiders? If these existing communities accept the above, the consequence is less forest area available per household and less PFES payment to these households, which would eventually lead to ineffective implementation of PFES due to weak engagement of local people.

There is a perceived inequity among provincial authorities as well. For example, 10% of the administrative fee for FPDFs is too tight for Son La FPDF as the FPDF has to distribute monies to 65,000 forest owners. The administrative fee is reasonable for Lai Chau FPDF, as the FPDF only needs to distribute monies to nine FMBs, one forest protection department and some rubber companies. Another question is how the benefits and responsibilities can be shared among relevant provincial State agencies that are in charge of PFES implementation within the province. In addition, the different status of FLA, the data inaccuracy and the ambiguity of forest boundaries could all lead to equity issues in PFES payments in these provinces. The disparity of payment levels due to the number and size of service users across watersheds is also large and should be adequately addressed.

iv. Understudied issues that need to be further researched and studied to provide solid lessons learned and practical policy recommendations for FLA and PFES

Consultations with the interviewees and literature review indicate numerous knowledge gaps that need to be further studied and addressed:

- The environmental, economic and social impacts of the PFES program remain unclear. All government interviewees asserted the need to carry out such a study to report to both ES buyers and sellers.
- Several REDD+ pilot projects (e.g. Dien Bien), CDM (e.g. Hoa Binh) and pilot benefit-sharing mechanism and participatory forest monitoring programs (e.g. Dien Bien) have been implemented in provinces for several years in order to support policy development. Yet the effectiveness of these proposed mechanisms developed through those projects is unknown. Carrying out evaluation and lessons learned from the implementation of those projects provides solid evidence for policy makers to uptake lessons learned and models proposed by previous projects for PFES – such as how

to set up direct PES contracts and direct PES payments and how a benefit distribution system (BDS) can be designed to ensure the social and environmental outcomes.

- The direct payment in Hoa Binh for landscape protection opens up a new way of implementing PFES. Yet, to what extent this can enhance PFES effectiveness is still unknown and what institutional arrangements should be in place to ensure ES are actually delivered, is still in question. Future study could certainly address those knowledge gaps.
- Migration and shifting cultivation are not only the key drivers of deforestation and forest degradation in these four provinces; socio-political issues affect deforestation and forest degradation too. To what extent do migration/shifting cultivation reinforce or remedy deforestation and forest degradation? Who should benefit from PFES and REDD+? How should benefit-sharing mechanisms be designed to capture those dynamics?
- According to provincial statistics, forest land currently managed by villages, HHs and HH groups differ from province to province (Hoa Binh: 78%, Lai Chau: 41%, Son La: 24% and Dien Bien: 12%).¹ However, provincial government interviewed in all four provinces provided different overviews on the allocation status. According to those interviewees, in all four provinces, local communities manage more than 50% of forest area. In all these provinces, PFES payment to communities is common but how communities use PFES payment and their impacts on forest protection is yet unknown.
- Who benefits from PFES? Local people or hydropower plants? All hydropower plants in all provinces delay the payment to the Fund in order to use this financial capital for their own business.
- Grouping individual and household forest owners into a cooperative for effective organization of PFES payment is ongoing in Son La. This arrangement could potentially reduce the workload for FPDFs in delivering PFES payments and encourage community-based forest management, but how this

¹ Note that the majority (82%) of the forest land had not been allocated officially by the end of 2014. Most of these forest lands are expected to be allocated to villages and households, so this rate will be significantly higher once the allocation has been fully completed.

model should be best operated is still unclear and potential legal barriers in providing land-use rights to these groups should be carefully studied.

- Trade-offs between equity, effectiveness and efficiency should be further studied. As only eight FMBs are PFES recipients in Lai Chau, this makes payment distribution easy and efficient. However, the role of local people is unclear in this arrangement (either as labor providers or as forest managers). It is also unclear as to how much forest is actually managed by villages and HHs, which has obvious implication for equity and effective outcomes of PFES. In Lai Chau, 42% of forest land is under FMBs; 28% is under communities; and 13% is under households and groups of households. The FMBs then sign annual forest protection contracts with local communities and groups of HHs. The level of ownership and willingness that local people have to stay engaged in this arrangement and any potential conflicts of interest that could arise need to be carefully studied. The expectation for a high level of PFES payment together with interest in capturing these monies under the authorities could make them hesitant in accelerating FLA to communities and households (so that benefits, rights and power would stay with management boards/authorities).
- The main objective(s) of the PFES program needs further clarification – is it a performance-based payment for enhancing forest environmental services (FES) or social development? Lai Chau FPDF uses part of its 10% management costs for rural development (e.g. infrastructural development for FMBs, school for children based on provincial needs and to develop models for agriculture production). PFES is not a social and rural development program and such payment should be reinvested in sustainable forest management. How should provincial authorities balance these two objectives and government views and policies and how should they be scrutinized?
- In Dien Bien, the compensation for forest loss by hydropower plants has been made to the Dien Bien FPDF. While the payment is small, there are high transaction costs to transfer the monies to FMBs and to carry out the paperwork and reforestation activities.

These high transaction costs give less incentive for the FPDF to manage the payment for reforestation. In addition, the Sub-Department of Forest Protection and Sub-Department of Forestry also expressed their concern about the lack of available land for reforestation. Unclear mechanisms have hampered the implementation of this policy.

v. Policy gaps that need to be addressed to improve PFES and REDD+

Monitoring and evaluation. A clear monitoring and evaluation mechanism for environmental, social and economic outcomes for PFES is needed to guide provincial authorities. To operate the monitoring and evaluation (M&E) mechanism of PFES, each province needs to develop a detailed plan for M&E.

The following key activities are needed for an M&E plan:

- Set up the baseline data on environmental and social conditions of PFES areas
- Develop criteria and indicators for M&E of environmental and social impacts caused by PFES. The criteria should be measurable and verifiable as well as cost-effective
- Collect data and information
- Analyze, report and publish the M&E results.

Capacity building for local staff and for local people in monitoring financial, environmental and social impacts is needed as the provincial authorities highlighted them as being overlooked. Moreover, a poor database for PFES has impeded the management of the PFES program. In all these four provinces, there was no application of GIS linking statistics to spatial information for PFES implementation. Such a database is urgently needed to monitor the effectiveness of PFES implementation. Capacity building and information exchange among the four provinces can also help to address this gap.

Furthermore, there is no clear guidance on how to use the 10% of PFES money by FPDFs. No strategic investment for forest management activities has been made as the management costs mainly cover staff time, capacity building, awareness raising and infrastructural development. The role of FPDFs as of now is just to deliver

the payment to forest owners, while other important roles such as promoting funds from donors and dissemination of best practices and others are not considered by FPDFs. Strategic planning on how PFES monies should be used to address the underlying drivers of deforestation and forest degradation and how to improve the overall performance of provincial forestry sector is essential.

Law enforcement. Law enforcement is a challenge in all these four provinces. Provincial government agencies have different views and interests on how policies should be enforced. For example, the Lai Chau FPDF interviewees asserted that hydropower plants often delayed their payment of PFES fees to the FPDF. A hydropower plant is required to pay VND 4 billion but so far it only paid VND 900 million. Despite Decision 40 that defines a penalty for late payment, the interviewees from Lai Chau FPDF and Son La asserted that the penalty was too low compared with the actual interest they received from the bank by delaying their payment. Moreover, while an interviewee in Lai Chau saw the need to strengthen the legal framework for law enforcement, another suggested a light law enforcement. According to this interviewee, the province wants to attract more investment in the province and to ensure that these hydropower companies can operate well in order to generate tax and PFES money. It is also unclear for the interviewees as to what are the obligations and responsibilities of each government agency in penalizing late payers. None of those government agencies had a clear idea about who should act as a lead agency in penalizing late payers and how penalties should be collected and used. Law enforcement applied to FES providers was also weak. Government agencies were all reluctant to apply sanctions for forest violations to poor, ethnic minorities and marginalized groups to avoid social restlessness and to ensure national border security.

Different views on eligible payees in different provinces leading to inconsistent policy implementation. For example, in Lai Chau, PFES payment was made to rubber companies as the province follows MARD's Guidance No. 2855/QD-BNN-KHCN dated 17/9/2008, which considers rubber to be a multipurpose tree. In another words, rubber plantations are regarded

as forest. However, in Dien Bien, rubber plantations is seen as should not be eligible for PFES payments (the FPDF refers to Letter No. 291/TCLN-KHTC issued by VNFOREST on 12 March 2013 to Kon Tum FPDF). There is still no proper legal framework and guidance on this issue.

In Lai Chau, forest land classified as Ic (bare land with shrub) is still eligible for PFES payment while only IIa (restored forests after period of swidden) and above are usually counted for payment in the three other provinces. The justification made by Lai Chau was as follows:

- Ic (bare land with shrub) forest land plays a significant role in delivering environmental services in the province;
- Ic (bare land with shrub) forest land is about to become forest as natural regeneration capacity is quite high;
- The province wants to encourage people to restore forests to transform the land gradually from Ic to IIa over time.

However, the above resulted in inconsistency in policy implementation among different provinces and provoked a sense of inequity among the relevant stakeholders.

Bundling multiple sources of funding to enhance forest protection outcomes. While the PFES payment is small in some cases (e.g. VND 5000/ha/year in Ma River watershed in Dien Bien; and VND 165,000/ha/year in Hoa Binh), there are other funding resources for further forest protection such as Decision 57, New Rural Development Program, Programme 30A, and others. However, there is a lack of coordination among such funding resources and programs for better forest management.

Institutional arrangements. There is inconsistency among provinces as to whether FPDFs should be under PPC or DARD (e.g. Hoa Binh FPDF was established under PPC). It was suggested by interviewees in Son La that FPDFs should be placed under DARD as DARD has better expertise for implementation and this would avoid the complex approval process under PPC.

1 Introduction

Vietnam officially started its policy on forest land allocation (FLA) for organizations, individuals and households in 1994. Decree No. 02/CP (1994), Decree No. 01/CP (1995) and Decree No. 163/199/ND-CP are the key policies influencing the allocation of forests and forest land and a large area of forests and forest land has been allocated for forestry management and development. MONRE (2011) reported that more than 2.6 million land-use certificates were issued nationally for users of forest land and for a total area of 10.6 million ha, of which about 270 land use certificates for forest land area of about 1.8 million ha were issued in Dien Bien, Lai Chau, Son La and Hoa Binh provinces. Data from MARD (2014) indicate that 66% of forests are State-owned (mainly special use and protection forests), 25% of forest areas are owned by households and individuals, 4% of forests are managed by local communities, 1.5% are privately owned and 4.4% of forests are under the management of other organizations (i.e. army forces).

In 2010, the Government of Vietnam approved Decree 99 on Policy on Payment for Forest Environmental Services (PFES). Three environmental services being practiced nationwide are soil erosion control and water regulation in watershed areas and ecotourism business. MARD (2014) reports that total revenue from PFES for 2011–2014 was USD 157 million, of which 98% of revenue came from hydropower plants. Twenty-nine provinces are implementing PFES and the PFES payments are paying for protection of about 4 million ha of forests in these provinces. In the northwest province, PFES schemes cover 1.1 million ha of forests.

Payments are made to forest owners who are managing forests to provide environmental services. The main data set used for setting up the payment under the PFES is a result of forest

and forest land allocation programs. However, data and information on the status and impact of forests and forest land allocation and results of PFES implementation are not up to date and are not properly arranged and analyzed. Moreover, the lack of monitoring and evaluation (M&E) of PFES outcomes and a poor understanding of how PFES benefits are currently being used and distributed across different levels are seen as major obstacles for effective implementation of PFES (Pham et al. 2013).

The northwest provinces including Dien Bien, Lai Chau, Son La and Hoa Binh have critical natural resources and play a crucial role in watershed management under the national PFES program. These provinces all have high poverty rates in ethnic groups, more than 40% of their forest lands are currently managed by local communities under community forestry regimes and are listed in the top 10 provinces that receive the largest PFES payments in the country. Yet previous studies conducted by CIFOR in Son La, Hoa Binh and Dien Bien during 2011–2015 have showed the mixed impact of forest land allocation on both forest protection and development and local livelihood improvement (Yang et al. 2015). There were challenges in designing an effective, efficient and equitable benefit-sharing mechanism under PFES at the local level to account for local preferences (Pham et al. 2014), there were current pitfalls in existing institutional settings for PFES implementation from provincial to village level (Pham et al. 2014) and there are challenges in involving the private sector in forest protection and development in general and in PFES in particular (Pham et al. 2009). Moreover, although these four provinces all have high potential for Reducing Emissions from Deforestation and forest Degradation (REDD+) and all have high political will to adopt this new financial mechanism, only Dien Bien has developed a Provincial REDD+

Action Plan. As these provinces receive the largest share of the national PFES program, lessons learned on how to address those above challenges, either in each province or among all provinces as collective action, are critically important for future national PFES policies improvement and the future design of REDD+.

This study is seen as the first step in addressing those gaps by providing the most updated data and information on the current status of forest land allocation and PFES in Hoa Binh, Son La, Dien Bien and Lai Chau provinces. The overall objective of this study is to provide up-to-date information and data on FLA and PFES in these four provinces. The study also aims to answer the following questions:

- What is the status of forest land allocation (FLA) and how has FLA been implemented in these four provinces? What are the opportunities and challenges for FLA and their impact on forest protection and development, local livelihoods and PFES?
- What is the status of PFES implementation and how is PFES currently implemented in these four provinces? What are the opportunities and challenges for PFES implementation?
- Has equity been taken into account in FLA and PFES?
- What are the issues that need to be further researched to provide solid lessons learned and practical policy recommendations for FLA and PFES?
- What are the policy gaps that need to be addressed to improve PFES and REDD+?

2 Approaches and methods

CIFOR has been carrying out comparative research on the effectiveness, efficiency and equity of a PES-like scheme in more than 16 provinces in Vietnam (including Hoa Binh province) since 2006 and on PFES (including Son La and Dien Bien) since 2008. This study is designed as a joint collaboration between JICA and CIFOR and is built upon existing frameworks and a database under current CIFOR programs. This allows CIFOR to share its research findings, information and data related to PFES in Son La, Dien Bien and Hoa Binh with JICA and at the same time is seeking opportunities to carrying out a more in-depth and updated assessment on FLA and PFES in those four provinces that are not covered in previous CIFOR studies.

Literature review: The team conducted a review of the following documents to gather information on FLA and PFES in those provinces and identify critical gaps of information that need to be filled during site visits:

- Vietnam FPDF’s annual report from 2011 – now on the status, list of buyers and sellers in those studied provinces
- Available data, reports and journal articles related to PFES and FLA in those four provinces

- Available newspaper articles and press on achievements and challenges for PFES and FLA in those four provinces
- CIFOR’s studies, reports and database on PFES in Son La and Dien Bien
- Provincial reports on the forestry sector, forest protection and development, PFES implementation in Vietnam collected during site visits in those four provinces.

The team spent 2 days/province and carried out the following research methods:

Semi-structured interviews with local authorities in four provinces: The team conducted in-depth discussions and interviews with local authorities to discuss the four main research questions. The number of key informants interviewed is presented in Table 1.

Site visit and transect walk: Although this was a short study, the team made a quick visit to a neighboring village and conducted a short meeting with local people in order to get a good understanding of local people’s perceptions of the pros and cons of FLA and PFES. In Lai Chau province, we visited the Phong Tho FMB. In Lai Chau, we visited Co Chay 2 village, Muong Pon Commune, Dien Bien district.

Table 1. Number of key informants interviewed.

| | Lai Chau | Dien Bien | Son La | Hoa Binh |
|---------------------|--------------|--------------|------------|--------------|
| No. of interviewees | 7 people | 9 people | 5 people | 8 people |
| | - FPDF: 1 | - FPDF: 1 | - FPDF: 4 | - FPDF: 3 |
| | - Sub-FPD: 1 | - Sub-DOF: 2 | - DONRE: 1 | - Sub-FPD: 1 |
| | - Sub-DOF: 1 | - Sub-FPD: 1 | | - PFMB: 1 |
| | - DONRE: 2 | - DONRE: 3 | | - DONRE: 3 |
| | - PFMB: 2 | - Village: 2 | | |

3 Overview of the northwestern provinces



Figure 1. Location map of the study sites.

Hoa Binh, Son La, Dien Bien and Lai Chau are four provinces located in the northwest region of Vietnam. This area plays an important role in watershed protection for major hydropower plants in the regions such as Son La, Lai Chau and Hoa Binh and downstream areas (see Figure 1).

These provinces share a common socio-political context and are confronted with common drivers of deforestation and forest degradation (Table 2). Forest cover in all four provinces is high (> 41%).

3.1. Lai Chau

Lai Chau has a total area of 906,879 ha including 738,994 ha of forest land (equivalent to 81% of total land) and 92,977 ha of agricultural cropland.² The main rivers are Da River, Nam Bum River and Nam Mu River with the water level around 2.8 m, 3.4 m and 3.6 m respectively. The province is

² Lai Chau Statistical Office. 2014. Lai Chau Statistical Yearbook 2014. Lai Chau province, Vietnam.

Table 2. Drivers of deforestation and forest degradation and PAMs.

| | Lai Chau | Dien Bien | Son La | Hoa Binh |
|--|---|---|---|---|
| Forest cover (2014) ^a | 45.01% | 41.12% | 44.71% | 48.96% |
| Key drivers of deforestation and forest degradation ^b | Shifting cultivation, hydropower plant development, hard weather conditions (hot, drought over a long time), timber and NTFP demand (LC Sub-Department of Forest Protection) | Shifting cultivation, migration from Son La, Hoa Binh and Thanh Hoa, cash crop production such as coffee and rubber, hydropower plant development | Shifting cultivation, cash crop production (coffee, maize, rubber) | Small-scale timber logging from adjacent communities, shifting cultivation, forest fires, cash crop production (orange) |
| Policies to address D&D ^c | Improve forest protection law enforcement (avoiding illegal logging); improve shifting cultivation management; improve capacity on forest fire control; PES to engage local community on forest management; public awareness raising on forest protection; revised forest planning to adapt to new conditions (Lai Chau FP) | Resettlement for migrant people; PFES; improve law enforcement | PFES; 57 program (post-5MHRP); Community-based approach for forest management; forest plantation (e.g. macadamia); piloting sustainable forest management models; reforming State forest enterprises; promoting investment to forestry sector; public awareness raising | PFES; 57 program (post-5MHRP); Compensation for forest loss |

Source:

a Sub-FPDs of four provinces. Figures include industrial tree plantations such as rubber

b,c Based on interviews with provincial authorities

divided into eight administrative units, including seven districts and one city. The total population of the province was estimated at 423,303 people; the population density was 47 people per km² in 2014. While there are only 34,689 people living in Lai Chau City, this area has the highest population density at 490 people per km², which is more than 10 times the average for the province. In 2014, the growth rate was estimated at 1.02%, which is lower than 1.06%, the average number for the country. In 2014, there were 247,728 people of working age (over 15 years old) and 84.23% of those lived in rural areas. Almost all (99%) of the population is currently working in non-State jobs. Just 11.7% of the workforce has been trained. The gross domestic product (GDP) in 2014 was VND 7058 billion: 24.02% was contributed by agriculture, forestry and fishing, 12.71% from construction, 12.01%

was from real estate activities and 11.29% was from electricity, gas, steam and air conditioning supply. Water supply, sewerage, waste management and remediation activities contributed 0.43% of the province's GDP.

Total forested areas in 2014 of the province were 406,377 ha including 95.5% in native forests and 4.5% in plantations. Muong Te district had 163,166 ha of forest, Nam Nhun district had 61,900 ha, Phong Tho district had 49,706 ha and Sin Ho district had 43,890 ha. Lai Chau City has the smallest forest area at 1589 ha. Some main forest products in Lai Chau province are wood (from native forest and plantations), fuelwood, bamboo, rattan, cardamom, bamboo shoots and others. The gross output of forest value in 2014 was estimated at VND 608.3 billion, where

59% was from wood and other forest product exploitation, 28% came from forest plantation and protection and 13% came from forest service. While Sin Ho district contributed 21.37% to forest economics, Lai Chau City contributed just 2.52%.

3.2. Dien Bien

Dien Bien is a mountainous province in northwest Vietnam. Its total area is 956,290 ha, of which 760,450 ha is forest land.³ The majority of forest land is located in the watershed of three large rivers: Da River, Ma River and Mekong River. The total area of Da River's basin in Muong Nhe district, Muong Cha district, Tua Chua district, Tuan Giao district and Muong Lay town is about 5300 km², accounting for 55% of the total area of the province. The forest cover rate of the province in 1999 was 28.7% (Decision No. 03/2001/QD-TTg dated 5/1/2001 of Prime Minister) and in 2012 was 40.2%. The forests of Dien Bien have an important role in watershed protection, protection of large hydropower projects on Da River and regulation of the flow to downstream areas.

It is bordered by Lai Chau province to the west, Son La province to the east, Yunnan province in China to the northwest, and Laos to the west and the southwest. Dien Bien province comprises one city, one town and eight districts; the main city is Dien Bien Phu.

The population of the province is 504,502 people (2012), including 252,378 men and 252,124 women; the population density is 52.8 people/km²; the growth rate of the population is 15.87%.

The province is home to 21 ethnic groups, among which the major people are: Thai (46%), Kinh (24.6%) and Hmong (18.6%), while other ethnic groups include Yaos, Dzay, Tay, Ha Nhi, Lao, Cong, Si La, Kho Mu and La Hu. While Thai people are gradually changing their traditional form of cultivation into permanent farming, Hmong people still rely on income from swidden areas and are usually known as shifting cultivation communities. In terms of language, Thai people are familiar with the Kinh language (Vietnamese

official language) while the proportion of Hmong people fluent in Kinh is far lower. The low levels of education and low levels of technology application have a significant impact on agriculture, forestry production activities and other activities.

3.3. Son La

Son La has a total area of 1,417,440 ha. Its administrative units include 11 districts and one city, with 204 communes, wards and towns. Of the total land area, 926,897 ha is forest land while 13.53% is agricultural cropland and the remaining is unused land. Forest covers half of the river basins of the Da River and Ma River with the two biggest hydropower plants of the country (Son La and Hoa Binh) and more than 100 other small and medium hydropower plants.

Its population is over 1.16 million people. Son La has 12 major ethnic groups, of which Thai ethnicity is the majority. The ethnic groups are as follows: Thai (54%), Kinh (18%), Hmong (12.02%), Muong (8.12%), Dao (2.5%), Sinh Mun (1.64%), Kho Mu (1.49%), La Ha (1.02%) and other groups (0.64%). In 2006, 11.3% of the population lived in urban areas while 88.7% lived in rural areas.

Son La has a GDP per capita of VND 1,900,000, and is mainly dependent on agriculture. The main agricultural products include: cereals (corn, rice, grains) (243,895 metric tons (t)/year), tea (10,785 t/year), sugarcane (136,574 t/year) and livestock (pork) 11,173 t of pork/year.

3.4. Hoa Binh

Hoa Binh has a total area of 460,869 ha, of which 338,614 ha is forest land, accounting for 73.5% of total natural area. The forest cover rate of the province in 2015 is about 50.0% with forest area of 424,544 ha. The area of non-forested bare land and hills that was planned for forestry is 96,114 ha, accounting for 20.9% of the province's total area (Hoa Binh DARD 2015).

The terrain is sloping hills and mountains from the northwest to the southeast, divided into two distinct areas: i) the northwest (upland), including the ranges of large hills and mountains, is heavily

3 Dien Bien Statistical Yearbook. 2014. Dien Bien Statistical Yearbook 2014. Dien Bien province, Vietnam.

dissected, rugged terrain, and makes for difficulty walking; and ii) the southeast (lower zone) under the system of rivers that are Da, Boi, Buoi and Bui, including the lower mountainous ranges, has less fragmentation, average slope, and allows smooth travel.

Hoa Binh has two main rivers: i) Da River originates from China and flows through the northwest provinces of Vietnam into the Red River in Viet Tri (Phu Tho province), which flows through Hoa Binh with a length of 151 km; and ii) Boi River originates from Ky Son district and flows through Kim Boi district and Lac Thuy district to Nho Quan (Ninh Binh province), and through Hoa Binh for 60 km. The province has a large power capacity with Hoa Binh Hydropower Plant and Hoa Binh Lake (near 10,000 ha), with important effects in regulating water for the Red River system.

Hoa Binh has five nature reserves (Hang Kia – Pa Co NR, Thuong Tien NR, Pu Luong NR -

together with Thanh Hoa, Phu Canh NR, Ngoc Son NR), two national parks (Cuc Phuong NP – together with Ninh Binh and Thanh Hoa, Ba Vi NP – together with Hanoi) and Hoa Binh Bed Wetland Reserve. These are areas with high biodiversity, valuable for developing tourism. The total population is over 817 thousand people distributed in 10 districts and one city, with 210 communes, wards and towns (GSO 2015). Most of the population belongs to six main ethnic groups: Muong, Kinh, Thai, Tay, Dao and Hmong of which the Muong ethnic group is in the majority with over 63%.

Annual average economic growth rate reached 9.1%. By the end of 2015, the proportion of agriculture accounted for 19.4%, industry construction accounted for 54%, services 26.6%; GDP per capita in 2015 reached about VND 36.5 million; State budget revenues reached about VND 2250 billion VND in 2015. The rate of new rural social standards is 16.2%; poverty rate is 13.7% (Hoa Binh PPC 2015).

4 Status of forest land allocation (FLA)

4.1. Overview of FLA in four provinces

According to the Sub-FPDs in four provinces, in 2014, unallocated forest lands are 7.8% in Lai Chau, 77.2% in Dien Bien, 2.1% in Son La and 3.1% in Hoa Binh. However, all interviewees asserted the actual progress of FLA is not well reflected in the current database system (Table 3).

Interview results with provincial authorities in four provinces show that the four provinces studied reflect two stages/statuses of FLA in Vietnam: (i) FLA was almost complete and all forest managers were granted land-use right certificates (Hoa Binh completed FLA in the period 1995–1997 and Son La was completed in 2000); (ii) incomplete and slow progress of FLA (Dien Bien and Lai Chau). Among the four provinces, Son La and Hoa Binh forest land was mostly allocated to communities and households while Lai Chau only allocated forest land to Forest Management Boards (FMBs). The allocated forests were production and protection forest.

All four provinces shared the same problems in implementing FLA such as: poor database management; inconsistent data between demarcation of areas and formal registration of areas; inconsistent land-use classification between DONRE and DARD, out-of-date data and lack of human resources and political interest in enforcing FLA in highly contested areas. A major issue of FLA is the overlap in allocated areas between the FMB and households that leads to land conflicts (e.g. in Hoa Binh and Lai Chau). All of these above factors have led to slow progress of PFES disbursement and difficulties in ensuring that the monitoring and evaluation of PFES outcomes are properly measured in all four provinces.

Each province also has to deal with specific barriers. In provinces where FLA has been completed (Son La and Hoa Binh), individual households are allocated scattered but small forest areas (from a few hundred m² in Son La, a few thousand m² in Hoa Binh to 3–4 ha in both provinces) leading to high transaction costs in

Table 3. Status of FLA in the four provinces (2014).

| Items | Lai Chau (ha) | Dien Bien (ha) | Son La (ha) | Hoa Binh (ha) |
|--------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Total land ^a | 906,879 | 956,290 | 1,417,440 | 460,869 |
| Forest land ^b | 765,606 (84.4%) | 759,752 (79.4%) | 926,897 (65.4%) | 338,614 (73.5%) |
| Forest land allocated ^b | 705,729 (92.2%) | 173,364 (22.8%) | 907,431 (97.9%) | 328,062 (96.9%) |
| Forest land unallocated ^b | 59,877 (7.8%) | 586,388 (77.2%) | 19,466 (2.1%) | 10,552 (3.1%) |

Sources:

a Lai Chau Statistical Yearbook 2014, Dien Bien Statistical Yearbook 2014, Son La Statistical Yearbook 2014, Hoa Binh Statistical Yearbook 2014.

b Lai Chau FPD 2015, Dien Bien FPD 2015, Son La FPD 2015, Hoa Binh FPD 2015.

Table 4. The status of FLA up to 31 December 2014 in the four provinces.

| Type of forest holders | Lai Chau | | Dien Bien | | Son La | | Hoa Binh | |
|---|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
| | Area (ha) | % | Area (ha) | % | Area (ha) | % | Area (ha) | % |
| FMBs | 321,763 | 42.0 | 46,449 | 6.1 | 99,411 | 10.7 | 31,498 | 9.3 |
| State forest companies | 11,629 | 1.5 | 1,244 | 0.2 | 20,964 | 2.3 | 22,729 | 6.7 |
| Other economic organizations | 12,130 | 1.6 | 0 | 0.0 | 1,047 | 0.1 | 3,254 | 1.0 |
| Army units | 2,417 | 0.3 | 0 | 0.0 | 19,403 | 2.1 | 1,176 | 0.3 |
| HHs/HH groups | 101,048 | 13.2 | 16,294 | 2.1 | 162,378 | 17.5 | 265,269 | 78.3 |
| Village communities | 214,096 | 28.0 | 96,193 | 12.7 | 30,851 | 3.3 | 1,698 | 0.5 |
| Other groups and organizations | 42,645 | 5.6 | 13,184 | 1.7 | 573,377 | 61.9 | 2,438 | 0.7 |
| People's committees (not yet allocated) | 59,877 | 7.8 | 586,388 | 77.2 | 19,466 | 2.1 | 10,552 | 3.1 |
| Total | 765,606 | 100.0 | 759,752 | 100.0 | 926,897 | 100.0 | 338,614 | 100.0 |

Sources: Lai Chau FPD 2015, Dien Bien FPD 2015, Son La FPD 2015, Hoa Binh FPD 2015.

disbursing PFES payment and monitoring ES. This also leads to low PFES payment levels, low willingness to participate in the PFES scheme and hence limited impact of PFES. Son La and Hoa Binh provinces see the grouping of individual households to enhance collective action in forest management and increase the effectiveness of PFES payment as a priority. Yet the feasibility of this option depends on local people's willingness to participate. In Hoa Binh, individual households are not willing to give up their rights and ownership over production forest land to join forestry groups. In contrast, in Son La, local people are more willing to join forest cooperatives rather than managing a small forest land area. Moreover, provincial interests in promoting and supporting drivers of deforestation such as orange farming in Hoa Binh, and mining in Dien Bien and Lai Chau also further complicate the FLA process. For example, in Hoa Binh, the expansion of orange farms is politically supported by provincial authorities and has led to more conversion of forests.

In provinces where FLA is still incomplete (Dien Bien and Lai Chau), provincial authorities are waiting for the 2015 forest inventory and statistics results to accelerate the process. However, contested areas such as between the FMB and households who both have land-use

rights certificates, migrants vs. local people, and customary rights vs. formal rules are still seen by provincial authorities as major challenges.

The potential risks identified as a result of current FLA in all four provinces are: (i) while the government aims to increase the forest area allocated to communities and households, FLA is hampered by the interest of private companies and forest protection management boards to retain forest land and do not involve local people; (ii) the overlap in the land-use rights regime between national parks, FMBs on the same land causes difficulties in both benefit distribution and monitoring ES. Table 4 also shows different equity implications for the benefit-sharing mechanism in each province. In Lai Chau, FMBs manage forests, while in Dien Bien most forests are managed by Commune People's Committees that are not yet allocated to any households. Households and communities have little say over forest resources. In Son La and Hoa Binh, households and groups of households manage forests. Yet, due to their small and scattered area, the actual benefits generated from PFES are low.

The rest of Section 4 highlights the specific opportunities and constraints on FLA implementation in each of the four studied provinces.

4.2. Lai Chau

After Lai Chau province was established in 2003, the Lai Chau PPC paid increasing attention to land checking and allocation. In 2007, the authority approved the result of checking and planning three types of forest in the province (Decision No. 1405/QD-UBND dated 9/10/2007) as the background for implementing land and forest allocation as well as Program 661. According to this, in 2007, there were 640,410 ha out of 790,425 ha of forest land allocated for household, FMB, community, national park and nature conservation board. The plan stated that the area allocated for households would be significantly increased while the area for conservation would be reduced. In 2008, Lai Chau PPC released Decision No. 23/2008/QD-UBND on regulation and support for converting to rubber plantations. According to this decision, the land that has an altitude lower than 700 m, a slope of under 40% and a soil depth of over 70 cm can be converted into rubber plantation. Some types of land with these conditions are shifting cultivation areas, poor quality forest, fruit and industrial plants and production forest land. Moreover, households who have been allocated land will contribute their land to the rubber plantation business. For Lai Chau hydropower construction, there are around 4962.6 ha with 1790 households who were resettled. On 12/3/2010, Lai Chau PPC introduced Decision No. 04/2010/QD-UBND about reclaiming land for Lai Chau hydropower and allocated new land and land certification for resettlement of households. On 20 August 2012, Lai Chau PPC approved a plan for forest protection and development for the period 2011–2020 (Decision No. 17/2012/QD-UBND), meaning that the protected forest areas of the province are set up and allocated to the FMB.

According to provincial interviewees, most of the forest area was allocated to FMBs so the transaction costs to collect data and disburse PFES payment was relatively low compared with other provinces. Interviewees highlighted that political will and support for both FLA and PFES were strong and that PPC is active in addressing the problems raised. The forest inventory program was completed in March 2016 and its results will provide updated data and maps for FLA management. However, the quality of current FLA data is poor, as the actual area in the field does not match with what is recorded in the land-use

management database. Forest maps only help to examine forest areas at commune level but the forest boundaries between villages are not clear and well defined (Lai Chau FPDF interviewee). The current FLA only creates incentives for FMBs as households only act as labor providers. Most forests are protected – the FMB and households only made forest protection contracts with limited rights and profits. According to Dien Bien PPC (2015), the slow working process of the consultant firm managing the FLA process as well as conflicts between local communities are considered as the factors leading to the slow progress of the FLA process.

4.3. Dien Bien

To enforce the land allocation process, on 20/3/2013, the Dien Bien PPC introduced Plan No. 388/KH-UBND on checking, completing procedures for land and forest allocation, and handling forest land-use right certificates in the period 2013–2015. To implement this plan, the authority released Decision No. 728/QD-UBND dated 20/9/2013 for granting expansion of land and forest allocation process. On 7 June 2013, the national government adopted a resolution about land-use planning for Dien Bien province up to 2020 (NQ71/CP). According to it, there are 423,113 ha planned for protection forest, 47,581 ha for special use forest and 257,413 for productive forest. Following this, on 26 September 2013, the Dien Bien DONRE and DARD introduced a guideline on content, order and method for land and forest inventory before allocation. In 2014, the Dien Bien PPC released Letter No. 3634/NN-UBND dated 29/9/2014 and Letter No. 196/NN-UBND dated 29/8/2014 about checking and allocating forest land for Dien Bien FMB, Tuan Giao FMB and Muong Cha FMB. Related to allocated land near the national boundary issue, the DONRE and province military released Agreement Letter No. 1824/BCH-TM dated 24/10/2014. Up to 2015, the FLA process in Dien Bien was seen as slow and needed to be improved. Only 176,440 ha out of 280,240 ha have been allocated for households and communities and only 84,532 ha of them have land certificates. The district authority did not focus much on FLA and did not supervise the work of the FLA consultant firm. Under this condition, the Dien Bien PPC released Letter No. 4022/UBND-TN dated 17/11/2015

to enforce the FLA and provide land certificates to forest owners.

The result of the forest inventory program was available in March 2016. The provincial authorities expected that this program would provide advance data and maps for FLA management. According to DONRE interviewees, a master land-use planning is stable for the last 5 years and specific zoning for socioeconomic development has been finalized and implemented. Steering committees to enforce FLA have been set up at provincial level and in 10/10 districts. The PPC also wants to accelerate the FLA process from 2016 onward. Plan No. 388/KH-UBND dated 20/2/2013 about checking and completed procedure for FLA from 2013–2015 is the key legal document and guidance for DONRE to ensure the quality of FLA.

According to a report of Dien Bien PPC, there are 176,440.33 ha out of 280,239.76 ha that have been allocated for household and communities up to October 2015. However the rest of this area (around 103,799 ha) is now in the process of allocation and is expected to finish some time in 2016 under pressure from the provincial government. For forest land that has been inventoried in 2015, the district government will allocate it to forest owners in the next few months.

Despite strong political will to fasten the FLA process, FLA is also impeded by numerous factors. First, according to the Forest Protection Department, migration from Hoa Binh and Son La to Muong Nhe has rapidly increased over the last 5 years. The Forest Protection Department has not been able to control either the migration pattern or the forest loss due to migration. Provincial authorities expressed their concern about the fact that those who drive deforestation and forest degradation are not actually benefiting from PFES and other programs. At the same time, migrants continue to purchase land from local people both formally and informally to continue and expand their swidden area. Shifting cultivation is still widespread while there is no effort to collect this data. Second, the forest areas allocated to households are often small and scattered, leading to high transaction costs in their monitoring and evaluation. Moreover, provincial authorities see human resources and provincial funding for FLA as inadequate. Third, the actual land area in the field does not match what is being formally recorded;

this made DONRE and FPD reluctant to allocate forest land in highly contested areas. The provincial authorities interviewed also highlighted the weak technical capacity of the consultant companies who supported the province in implementing FLA which led to delays in FLA.

4.4. Son La

Son La abided Decree 02/CP dated 15/01/1994 on FLA. FLA had been considered more or less complete since 1997. However, there are a number of issues arising from the results of FLA such as: (i) outdated and inaccurate data; and (ii) ambiguity in forest boundaries and forest owners. The introduction of PFES requires that the FLA should be revised to serve PFES payment distribution in order to be effective and efficient. As a result, Son La promulgated a number of provincial policies in consideration of revising FLA results. The major policies include:

- Decision No. 2778/QD-UBND dated 11/11/2008 on assigning investors to implement piloting of PFES implementation in Son La
- Decision No. 2479/QD-UBND dated 14/9/2009 to promulgate technical procedure to revise FLA results in Son La
- Decision 2984/QD-UBND dated 4/11/2009 on assigning officers to participate on the revision of FLA results
- Decision 750/QD-UBND dated 30/3/2010 on the approval of cost norms for FLA revision
- Decision 785/QD-UBND dated 5/4/2011 on the budget of FLA revision to serve for PFES implementation
- Decision 1159/QD-UBND dated 24/5/2011 to complement Decision 785/QD-UBND.

According to all of the provincial interviewees we spoke to, the current data on FLA are outdated and inaccurate compared with what is found in the field. There is also inconsistency between digitalized data and hard copy data, which creates difficulties for both DARD, DONRE and provincial FPDE in harmonizing their data set. According to both DONRE and provincial FPDE, over the past few years, private companies have made investment on land in Son La and collected land-use certificates from forest owners. However, after that, many land-use certificates were lost and forest owners have no proof of their

allocated land and forest land. The definition on forest land and forest area defined by MARD and MONRE is also contradicted leading to delays in PFES disbursement. Weak cooperation among provincial agencies is also noted by the provincial FPDF as the major challenge for acceleration of FLA. Forests are allocated to a large number of individual households and data are inaccurate so forest owners do not know where their forests are.

With the introduction of PFES, Son La has adjusted the result of FLA to implement PFES since 2008. The technical process for forest land allocation (Decision 708) and cost norm for forest land allocation work (Decision 750) were promulgated by a decision from PPC. In 157 communes under PFES, a forest land allocation group was established in each commune with the involvement of the vice chairman, forestry staff, cadastral staff and other officers if needed. The funding sources were from State budget. However, the budget was not sufficient for the FLA work in Son La, and only accounted for about half of the required budget (Son La DARD 2012). However, lack of and delay in the budget and other resources (e.g. equipment and human resources) are listed as the main constraints of the FLA process in Son La (Son La DONRE 2015). Due to the ambiguity of forest boundaries across forest owners, fieldwork is required to cross-check with what is stated in land-use right certificates, thus, further emphasizing the need for adequate human resources and budget. Moreover, the classification according to forest type uses the new criteria, leading to disparity compared with results using old criteria (Son La DARD 2012). The resettlement due to construction of the Son La hydropower plant and other hydropower plants makes the process more complicated. In Son La, forest was also allocated to village mass organizations (Farmer's Union, Women's Union etc.) for forest management; but due to regulation

of Land Law 2003 and Law of Forest Protection and Development, those forest owners are no longer eligible to be allocated land (Son La DARD 2012).

The collaboration between DONRE and Forest Protection Department in Son La is also weak. As DONRE is in charge of granting land-use rights certificates and the Forest Protection Department is in charge of fieldwork verification, the weak collaboration between these two agencies has led to inaccuracy of results (DONRE interviewees 2015).

4.5. Hoa Binh

The new forest inventory to grant land-use certificates for forest land under Decision 672/QD-TTg has been implemented and almost completed. This program is an effort to revise data from FLA. Data were compiled and published in March 2013.

The new forest inventory program is expected to provide more updated and accurate data on FLA. Currently, land-use rights certificates under Decision 672/QD-TTg and Decree 02 are both used in Hoa Binh (Department of Forest Protection 2015). Inconsistent definitions and data on forest land and forest quality between DONRE and DARD lead to difficulties in both PFES payment distribution and high transaction costs in monitoring and evaluation of forests. Forest is allocated to too many forest owners (nearly 70,000 forest owners) but the average forest area is often small and scattered.

According to all interviewees in Hoa Binh, since 2013, the Provincial People's Committee has not issued any new policies on FLA.

5 Status of PFES implementation

5.1. Overview of PFES in four provinces

5.1.1. Background information

Son La has the longest PFES implementation experience (payment distribution started in 2009) of all of the four provinces in the northwest. Hoa Binh and Lai Chau started to distribute PFES payment in 2012 and Dien Bien started in 2013. Annual PFES revenue in 2014 for Dien Bien was VND 192 billion, Lai Chau was VND 210 billion, Son La was VND 110 billion and Hoa Binh was VND 11 billion. The average payment also varied from province to province (VND 162,000/ha/year in Hoa Binh; VND 220,000/ha/year in Son La; VND 281,000/ha/year in Dien Bien and VND 439,000/ha/year in Lai Chau).

All of four provinces have forest area within the Da watershed and receive PFES payment from three large-scale hydropower plants: Hoa Binh, Son La and Lai Chau hydropower plants. Son La, Dien Bien and Lai Chau are the top PFES recipients in the country. Among the four provinces, PFES revenue in Hoa Binh is the lowest (Table 5).

PFES revenue in the four provinces is generated mainly from hydropower plants (Table 6).

The area of forest under the PFES scheme has increased over time (Table 7).

Table 8 shows a different group of ES suppliers in each province in 2015.

Table 7 and Table 8 show different statistics between central and provincial FPDEs on

Table 5. Operation/institutions of PFES.

| Categories | Lai Chau | Dien Bien | Son La | Hoa Binh |
|---|--|--|-----------------|----------------|
| Year of Fund's establishment | 2009 | 2012 | 2008 | 2012 |
| Year starting distributing PFES | 2012 | 2013 | 2009 | 2012 |
| Institutional arrangement | In 2009, was set up under Forestry Department Sub-DOF/DARD but since 2011, acts as independent unit under DARD | In 2012, was set up under PPC, but since 2015, acts as independent unit under DARD | Under DARD | Under PPC |
| Number of staff | 16 | 12 | 60 | 5 |
| Annual PFES revenue 2014 or 2015 (VND) | 210.872 billion | 192.323 billion | 109.578 billion | 11.400 billion |
| Average PFES level of payment per ha 2015 (VND) | 430,763 | 248,220 | 116,950 | 162,000 |

Table 6. PFES features

| Categories | Lai Chau | Dien Bien | Son La | Hoa Binh |
|--|---|---|---|--|
| Environmental services (ES) are implemented in the provinces | Watershed protection | Watershed protection | Watershed protection | Watershed protection and landscape beauty |
| Number of ES providers | 992 communities + 7 companies + 4 individual households + 2 group households + FMB | 40,000 HHs + 1 FMB (Muong Nhe) | 47,528 (State organizations: 35 + Village mass organizations: 1,375 + Communities: 2,217 + Group of households: 2,290 + Individual HHs: 38,245) | 11,7891 ^a (Organizations: 6 + individual HHs: 11,402 + group of HHs and communities: 218 + contracted organizations: 2 + contracted HHs: 163) |
| Number of ES buyers | 8 hydropower plants + 1 water supply company | 9 hydropower plants + 6 water supply companies | 31 hydropower plants + 2 water supply companies | 7 hydropower plants + 3 water supply companies + 4 tourism companies (direct payment) |
| Area of forest eligible to receive PFES payment (ha) | 436,646 | 311,241 | 582,177 | 72,904 |
| Frequency of payment | Twice per year (August for advancement and February for full payment) but based on actual needs of FMB and the level of payment. If the payment is too low, only pay once | Twice per year (unfixed time) and depends on level of payment | Once per year (at the end of the year) | Once per year (December or February next year) due to limited budget for operation |

Source: Report 06/BC-QBV&PTR-BĐH dated 08/01/2015. Hoa Binh FPDF (2015)

a Please note that this is the number of ES providers who are eligible to receive PFES but the number of ES providers committed to provide ES is only 11,626

Table 7. Total area of forest planned for PFES scheme payment (2011–2015).

| Province | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------|---------|---------|---------|------------|---------|
| Lai Chau | NA | 436,986 | 436,057 | 435,963 | 437,266 |
| Dien Bien | 331,241 | 331,241 | 331,241 | 331,241 | 331,241 |
| Son La | | 419,499 | 416,273 | 582,176.65 | 618,994 |
| Hoa Binh | | | 70,252 | 72,901 | 72,904 |

Source: Provincial FPDFs of four provinces: Lai Chau FPD 2015, Dien Bien FPD 2015, Son La FPD 2015, Hoa Binh FPD 2015.

Table 8. Forest under the PFES scheme 2015 by allocation target.

| Province | Total area under PFES scheme | Forests allocated to organizations | Forests allocated to FMBs | Forests allocated to households, communities |
|-----------|------------------------------|------------------------------------|---------------------------|--|
| Lai Chau | 435,963 | 5,995 | 429,600 | 368 |
| Dien Bien | 311,241 | 12,480 | 18,731 | 280,030 |
| Son La | 635,230 | 4,738 | 109,573 | 520,919 |
| Hoa Binh | 72,900 | 4,792 | 5,180 | 62,928 |

Source: VNFF's Report No. 9577/BC-BNN-TCLN dated 24/11/2015

Table 9. Total area of forest for which PFES disbursement has been actually paid (2011–2015).

| Province | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------|------|---------|---------|---------|----------------------|
| Lai Chau | NA | 424,699 | 422,720 | 429,658 | 429,874 |
| Dien Bien | | 218,403 | 218,403 | 222,653 | 311,241 ^a |
| Son La | | 419,499 | 416,273 | 582,177 | 618,994 |
| Hoa Binh | | 70,252 | N/A | 72,901 | 72,904 |

Source: Provincial FPDFs in the four provinces studied

a This figure is higher than forest land allocated to date (173,364 ha – see Table 3) because Dien Bien PPC has approved the payment for both those who have already been allocated forests and those who have forest areas that are under process of forest inventory for forest land allocation.

Table 10. Forest area under the PFES scheme by watershed (2011–2015).

| Province | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------|--|------|------|---------------------------|---|
| Lai Chau | N/A | N/A | N/A | N/A | Da watershed: 437,301.5 ha; Nam Mu watershed: 86,348.61 ha; Nam Na watershed: 49,361.97 ha |
| Dien Bien | 242,304 ha in Da watershed; 59,679 ha in Ma watershed; 32,297 ha is a catchment for small hydropower in province for 2011–2013 | | | N/A | Da watershed: 200,992.43 ha; watershed inside province: 5,464.617 ha |
| Son La | N/A | N/A | N/A | N/A | Da watershed: 419,565.63 ha; Ma watershed: 162,611.02 ha (started to release payment since 2015 – accumulate from 2013 and 2014) |
| Hoa Binh | N/A | N/A | N/A | Da watershed: 72,900.6 ha | Da watershed: 72,904.32 ha |

Table 11. Districts and communes under the PFES scheme.

| Province | Number of districts | Number of communes |
|-----------|---------------------|--------------------|
| Lai Chau | 8 | 106 |
| Dien Bien | 7 | 10 |
| Son La | 12 | 157 |
| Hoa Binh | 5 | 45 |

PFES data. Table 10 shows forest area under PFES scheme by watershed.

The area of forest actually paid by PFES has also increased over time (Table 9).

The following section presents our overall assessment on PFES performance in the four provinces.

5.1.2. The institutional setting

The institutional setting for PFES in the four provinces depends on the actual PFES revenue generated and the political will and support. In Son La, Dien Bien and Lai Chau, where PFES revenue is large (> VND 100 billion/year), political interest and support for PFES is high and provincial FPDF acts as an independent department under DARD with more than 10 full-time staff. In Hoa Binh where the PFES revenue is small compared with other provinces (VND 12 billion/year), provincial political will and interest are not as high as in the other three provinces. Moreover, the Hoa Binh FPDF was established under the Forestry Department with only five part-time staff.

While Hoa Binh FPDF takes a passive role in implementing PFES as Decree 99 instructs, Son La, Dien Bien and Lai Chau FPDFs take a more active role in developing their own provincial policies in applying and implementing PFES policies. These provincial policies focus on two areas: the benefit-sharing mechanism and institutional setting of PFES management at district and commune levels. The areas that are all seen by provincial authorities as critical for PFES implementation are currently overlooked in all four provinces: law enforcement for late

payees and clear guidance on monitoring and evaluation. However, there are conflicts of interest and different views on law enforcement for both buyers (e.g. hydropower plants) and sellers (e.g. local communities and ethnic groups). In all four provinces, social stability and maintenance of investment by the private sector in the provincial economy has impeded law enforcement for both of these groups. For example, all interviewees in Dien Bien province highlighted that many ethnic group villagers have violated the PES contract by clearing the forests for swidden. However, the local government cannot impose a penalty or enforce a law because this will cause conflict amongst the Kinh and ethnic groups. A Forest Protection Officer in Dien Bien also stated:

We have arrested many illegal loggers but had to release them in few hours. If we impose the law too strictly, the ethnic groups will move to Laos and Cambodia and who will protect our border? Similarly, many private companies contribute to provincial economy, we want to have more investment from private companies and the province cannot penalty for late payment. Anyway, without their help, we cannot collect PFES fee.

The four provinces also have different views, foci and interests in ES as well as policies associated with each service. Among the four provinces, only Hoa Binh shows a clear interest in implementing all four environmental services listed under Decree 99. Lai Chau only prioritizes and is interested in implementing watershed protection services applied for hydropower plants while Dien Bien and Lai Chau, in addition to those, also show interest in watershed protection services for water supply companies and tourism activities. Among the four provinces studied, only Hoa Binh FPDF encourages direct payment methods for ecotourism (i.e. buyers negotiate and directly pay beneficiaries without paying through the Fund), while the other three provinces only express their interest and support for indirect payment. The direct payment in Hoa Binh, however, currently only applies for landscape beauty services. According to a Hoa Binh FPDF interviewee, landscape beauty will only generate small funds compared with other sources while the Fund has limited financial and human resources. Therefore, encouraging direct payment will help to reduce the operational costs.

Circular 24/2013/TT-BNNPTNT (dated 6/5/2013) regulates organizations, individuals and projects that have to pay compensation for forest planting if they convert forests to other land use purposes. In those four studied provinces, hydropower plants have to pay compensation for forest areas cleared due to their construction. Dien Bien and Lai Chau have received compensation for the last 2 years while Hoa Binh only started receiving compensation since the beginning of this year. Yet, having this additional small revenue from this source of funding is seen as *ad hoc* and has high transaction costs due to small compensation amounts compared with costs for administrative procedures in both Dien Bien and Hoa Binh FPDFs.

Among the four provinces, only Dien Bien has a provincial REDD+ action plan. Yet, the provincial authorities in Dien Bien as well as the other three provinces are sceptical about REDD+ and have limited interest in developing REDD+ due to uncertainty about the financial benefits generated from REDD+. Among the four provinces, only Hoa Binh provincial authorities highlight the need to treat PFES and REDD+ as a part of Provincial Forest Protection and Development Plan. The other four provinces express their belief and interest in treating PES, REDD+ and Provincial Forest Protection and Development Plan as separate programs.

All provincial authorities in all four provinces highlighted a lack of coordination among DARD, DONRE and other provincial agencies with provincial FPDFs. Additionally, interviews with Son La and Hoa Binh indicate that there is no allocation of responsibilities among those agencies, particularly DONRE in delivering PFES.

5.1.3. Payment distribution and benefit-sharing mechanism

Benefit sharing and payment distribution varies from province to province although they do all share common sociophysical conditions. At provincial level, the provincial FPDFs, only Lai Chau had a surplus budget for its operational costs generated from PFES (VND 20 billion/year) due to the large amount generated from hydropower plants operating in the province and the small number of forest owners. The other three

remaining provinces had insufficient budget for their operation due to a large number of small and scattered forest owners (e.g. Son La province) and only a few hydropower plants operating in the provinces (e.g. Hoa Binh). As the result, in addition to covering operation costs, only Lai Chau used its management fee for a wide range of purposes: development and support of new livelihood models and provincial infrastructural development (20% of total management fee). At the district level, only Son La set up a district and commune PFES management board with full-time staff; the other three provinces used existing government structure such as FMBs to channel PFES payment to the final beneficiaries.

There are five payment modalities applied in the four provinces: (i) payment to a group of households (10–15 households) (all four provinces); (ii) payment to a head of village acting on behalf of a village (e.g. in Hoa Binh, Son La, Dien Bien); (iii) payment to communities (Son La, Dien Bien, Lai Chau); (iv) payment to a FMB (in all four provinces); and (v) payment to private companies (Lai Chau and Son La). The level of payment varies leading to different impact of PFES within and among provinces. Even in the case of PFES payment to communities and villages, only Son La and Dien Bien have had significant amount of PFES payment for a small number of villages; most villages had a very small amount of PFES payment (ranging from a few hundred VND in Hoa Binh to a maximum of several million VND in Lai Chau).

Only Dien Bien has issued clear guidelines on how payment distribution to villages and communities should be recorded and reported. The frequency of payment also varies from province to province, ranging from once per year in Son La and Hoa Binh due to high transaction costs of distributing to a large number of forest owners, to twice per year in Dien Bien and Lai Chau due to the need to have advance payment from forest owners and pressure from the central fund to request provincial funds to disburse PFES payment on time. In the case of Son La, the payment is normally made in March/April of the following year and payment for 2015 was to be released by May or June 2016. This delay is because forest rangers have not yet completed the checking of forest areas owned by households and individuals.

The questions associated with who should be eligible to receive PFES, which has not been fully considered by the four provinces, will need to be addressed to ensure the effectiveness of PFES. For example, the main driver of deforestation and forest degradation in Dien Bien and Lai Chau is shifting cultivation caused by migrants from other provinces and landless poor ethnic groups. Yet, both FLA and PFES currently only target stakeholders who have local residence and land-use right certificates. In Lai Chau, an initial proposal made by local ethnic people and migrants to stop shifting cultivation in order to receive PFES payment has been considered and approved by the provincial FPDFs. According to Lai Chau FPDF, although these ethnic groups do not have land-use right certificate, they are actors behind drivers of deforestation and degradation so are eligible to receive PFES payments. In the other three provinces, legal rights are the key factor in determining PFES payment and beneficiaries.

Currently, the revenues are distributed from Forest Protection and Development Funds (FPDFs) to service providers who are communities and households by cash payment and to FMBs through bank transfer. However, when payments come to communities, communities can decide among themselves on which form the payments should be distributed to individual members. Previous CIFOR studies pointed out those payments to communities are used: i) to equally distribute to members; ii) for infrastructure development; iii) for micro loans; iv) as payment to village forest protection groups; and v) as reserves in community funds (Pham et al. 2014; Le et al. In press).

1. **Access to market and existing infrastructure:** For example, isolated communities with difficult access to market or communities often prefer to receive in-kind payments, which are in need of basic infrastructure. Communities will organize a village meeting to decide on their needs and how PFES payment should be used. In contrast, Kinh communities often prefer in-cash payment as they have better access to markets and infrastructure.
2. **Level of incomes:** In-cash payments are often preferred by recipients with low level of incomes while wealthy communities prefer to have a combination of both in-kind and in-cash payments.
3. **Level of trust in and capacities of financial management of local authorities and villagers:** Cash payments are preferred in communities where corruption and transparency is an issue.

Pham et al. (2014) found that the principle factor determining the distribution of revenues is the extent to which villagers and the Commune People's Committee trust in the accountability and capacity of the village management boards and mass organizations.

4. **Existence of strong collective action and customary law:** In-kind payments, especially in the form of common assets, are likely to be preferable in communities with strong collective action
5. **Local perceptions on equity:** The options of PFES payment used are influenced by local perceptions on equity. For example, if a village has long-held practice of using an egalitarian-based approach, the PFES monies are more likely to be equally distributed amongst all households. If input-based is preferred, the monies can be tailored to groups with forest conservation efforts (e.g., forest protection group).
6. **Size of payment:** Our findings in both Dien Bien and Son La indicate that if the household only owns a small area of land (< 3 ha) and therefore only receives a low level of payment (< USD 10/year), people prefer to receive a cash payment and prefer two ways of spending their PES revenue: spending on basic household consumption such as food, fuelwood and medication (e.g. Son La province) and contributing to the village fund for community activities (e.g. Dien Bien province). The decision on the first or second option depends on household interest, on the popularity of the traditional community practice of sharing and the quality of leadership in the community.
7. **Financial management skills of villagers:** Studies conducted in Son La, Dien Bien, Nghe An and Hoa Binh also show that money gained from the PES program can be vulnerable to rapid and less welfare-enhancing spending such as alcohol, if local people do not have good financial management skills. As the result, in these communities, local authorities and farmers prefer to receive in-kind payments.

5.1.4. PFES payment mechanism in special-use forest in 2011–2015

Lai Chau: According to Decision 1796/QD-TTg, 7500 ha of Hoang Lien National Park are located

in Lai Chau province but there are no payments for the park from Lai Chau PFES. Muong Te Nature Conservation has 33,775 ha. Since 2014, following Decision No. 36/2014/QD-UBND, the FMB can use 10% for a management fee (staff salary, office running, etc. at community level, and at least 30% of money can be used for forest protection and development, forest fire rescue such as salaries for farmers who patrol the area, buying equipment for forest protection, buying seedlings for forest restoration, improving infrastructure such as the road system, etc. A total of 70% of the payment will be used for village activities, rewarding and being shared among all members under agreement of all members of the villages.

Dien Bien: Muong Nhe Nature Conservation Area has 45,581 ha and Muong Phang Landscape Conservation Area has 4,436.6 ha but there is lack of information about how they share PFES money. For communities who received PFES money, they must have an agreement about how much money will be used for general activities such as forest protection, forest patrolling, buying of equipment for forest protection, contributing to building infrastructure such as roads, village meeting houses and how much will be shared among all of the households in the villages.

Son La: PPC promulgated Decision No. 1853/2015/QD-UBND on the guidance for PFES money use by communities in which around 40% of PFES payments is transferred to the village forest protection group to buy labor equipment needed for forest protection and to pay a daily rate to the members of the group.⁴ The other 60% is invested in building necessary infrastructure (e.g. village road, water-pumping system). The ratio of 40/60 could be adjusted. However, as stated by Son La interviewees, this decision is only a guide and the communities still have their own rights to decide how payments should be used, as enshrined in Decree 99.

Hoa Binh: Forest owners decide how payment is to be used. As the average payment is even lower than in Son La, in some cases a community receives only USD 20–30 per year, which is mainly used for a community's annual party. There are some

cases, where forest owners actually refuse to receive the payment, as they cannot afford to go to the CPC office to get the payment. PFES payment has also no impact on livelihood development in Hoa Binh province.

5.1.5. Monitoring and evaluation

Monitoring forest quality and social impact is absent in all four provinces. The current environmental impact of the PFES program is defined based on the reduction of forest fires, the increase in forest cover and the reduction of forest violations. Yet, their parameters do not reflect the actual cause leading to these changes. For example, in Hoa Binh, provincial authorities highlighted that the reduction of forest fires and forest violations are mainly due to poor conditions of forests, stricter law enforcement and heavy penalties and has limited correlation with PFES due to low levels of payment. The interviews with FPDFs in all four provinces reveal that there is no assessment on the impacts of PFES on livelihoods and incomes of local households in PFES areas. In the case of Hoa Binh and Son La, the small amounts of money (<USD 1) paid by PFES cannot help to improve the income of local people. It is reported in Son La that for areas where payments are made to communities (community forests), the PFES money has greatly contributed to common work of the village such as building village cultural houses, road construction, etc.

5.1.6. Stakeholders' valuation on the impact of PFES on forest management and livelihoods development outcomes in the period 2011–2015

Lai Chau: The provincial interviewees claimed that benefits from PFES helped to encourage local communities to work on forest protection, especially on fire rescue because communities would lose payment from PFES if they do not carry out forest protection activities. According to Lai Chau Forest Protection Department, in recent years, the number of big fires was significantly reduced as a result of community involvement in forest protection. According to Lai Chau FPDF (2015), PFES significantly contributed to improving livelihoods and reducing poverty in Lai Chau province. On average, each household

⁴ The daily rate is made upon the agreement via village meeting.

received VND 2.6 million from PFES, which contributed to 16% of their income. Some households in Muong Te district received VND 26 million/year.

Dien Bien: According to a report of Dien Bien FPDF (2015), in watersheds that implemented PFES, deforestation and illegal logging was significantly reduced. The awareness and behavior of local communities with respect to forest environmental value was improved. The communities now are more involved in forest protection by setting up many forest patrol groups. However, as Dien Bien FPDFs and Forest Protection Department interviewees highlighted, this is subjective assessment without any proper data to back it up.

Son La: There is a contrasting view within FPDF on the impacts of PFES. Provincial FPDF interviewees asserted that PFES helps to increase the quality of forest protection while DARD interviewees did not share the same view. However, there are no available figures or data, which could investigate the correlation between PFES and forest protection tasks. Provincial FPDFs also highlighted that approximately 1000 constructions (village road, water pumping system etc.) were built with money from PFES payments. All interviewees in Son La agreed that awareness of the importance of forests increased and the number of forest violation acts reduced. However, there are no actual data to support such claims. PFES payment transferred to households was VND 450,000 per year on average, which contributed less than 1% of annual incomes on average.

Hoa Binh: All provincial interviewees claimed that it was difficult to assess the contribution of PFES as there was no such evaluation. However, all of the interviewees asserted that with very low payment, it is unlikely that PFES payment could significantly contribute to positive environmental outcomes. As an informant stated, the reduction of forest violation acts in Hoa Binh was due to the degradation of forest resources while PFES payment only had a minor impact.

5.1.7. Equity consideration in PFES

The collaboration mechanism among PFES-related organizations at provincial level is not consistent

among the four studied provinces. FPDF, FPD and DONRE are often addressed as key actors in implementing PFES at provincial level. However, the benefits and responsibility of those actors are different from province to province. In Lai Chau, the Forest Protection Department is excluded from PFES benefits. The informant from Lai Chau FPD stated that they are required to be involved in forest verification to carry out PFES implementation, but this task was considered to be their responsibility and no extra budget from PFES was allocated to them for it. In Dien Bien and Son La,⁵ FPDs still received a budget, which was withdrawn from PFES payments to conduct the work of forest verification. DONRE, in all four provinces, stated that they were not directly involved in PFES even though they were a key actor for FLA as it was the responsibility of DARD.

FLA is at different stages among the four studied provinces and has different implications for equity consideration for PFES. The data quality from FLA in all four provinces is not sufficient to support PFES payment distribution. The ambiguity of forest boundaries leads to challenges for calculating PFES payment. For example, in Hoa Binh province, some households claimed that their allocated forest area is indeed bigger than the determined forest area, which is eligible for PFES payment (Da Forest Protection Management Board 2015). This may increase the distrust of local people. When forest owners still receive PFES payments (even if they are not clear about the location of their allocated forest), PFES will be at risk of being perceived as a subsidy to support forest protection just like other State forestry programs (661, 57).

In Lai Chau, where forests are not allocated to households and communities, the PFES payments to the contracted households and communities are slightly lower than to households and communities, which are allocated forests as in Son La and Hoa Binh because of another 10% of administrative fee retained by the FMBs. In Son La and Hoa Binh, where FLA was completed, households and communities are only eligible to be allocated forests, which are at lower quality than forests allocated to State organizations. As K-coefficient is applied, it means that the payment level for households and communities is also lower.

⁵ Son La FPD receives VND 4000 per ha of verified forest.

The payment level significantly varies from watershed to watershed. This notable difference could provoke conflict among forest owners as they still bear the same costs and risks (e.g. forest patrol, responsibility for forest protection) but the benefits are different (distributional equity). This issue is taken into account by local authorities (e.g. Son La), but they do not have sufficient authority to cope with this issue. It needs political will to balance the payment level among different watersheds.

The current distribution mechanism provokes concerns on the linkage between the amount of payment and the quality of forest. For example, in Hoa Binh province, the forest area that received payments from Hoa Binh hydropower plant is of lower quality than forest area that received payments from Ba Thuoc II hydropower plant, but the former is eligible for higher payment than the latter as Ba Thuoc II hydropower plant's scale is small. The fact that better forest gets lower payments poses a question about the equity of PFES.

Forest owners who are State organizations can take out 10% of PFES payments for the work of payment distribution to their contracted households and communities. However, payments significantly vary based on payment level and total area receiving PFES. In addition, the workload of payment distribution is not homogenous as it depends on how many households and communities were contracted. Thus, 10% of the administrative fee could be sufficient for one owner but insufficient for another as in the case of Lai Chau province.

Regulation of fixed administrative fee (10% of PFES payments) for provincial FPDFs is also

a concern. This 10% is criticized by provincial FPDFs as not flexible to adapt within the needs of budget and requirements of the workload. The administrative fee (10% of total payments channeled to provincial FPDFs) is sufficient for some provinces (e.g. Lai Chau) but not for other provinces (e.g. Hoa Binh). The workload of FPDF depends on the number of forest owners and the payment distribution method (i.e. transfer via bank or direct cash to forest owner).

The definition of forest also has impacts for equity consideration. For example, the question on whether rubber tree plantation area is eligible to receive PFES payments arises. In Lai Chau, the area is still eligible for PFES payment and private companies that invest in the area also get their share. In Dien Bien, however, this area is excluded from PFES forest area. In the same manner, only in Lai Chau, 1C forest is eligible for payment but not in other provinces. Those situations pose questions about who should get benefit.

The employment of K-coefficient demonstrates how the equity discourse at central level fails during implementation at local level, as all four provinces claimed the K-coefficient is too difficult to be used for implementation. K1 and K2 require a huge budget and resources while K4 is too ambiguous. Only K3 is used, and combining with low level of payment, the disparity of benefits to natural and plantation forests is not prominent and it is hard to conclude that K3 adequately captures the equity issues.

In all four provinces, K factors (K1, K2, K3 and K4) were seen as costly and unrealistic so all four provinces commonly applied K3 (forest origin such as natural forests and plantation) (Table 12). K1 and K2 are criticized as being too costly for

Table 12. Factors considered in PFES amount determination (2011–2015).

| Province | K value | Legal framework |
|-----------|--|----------------------------------|
| Lai Chau | 1 | (QD36/2014/QD-UBND) |
| Son La | K=1 for natural forest and K=0.9 for plantation forest | QD 2804/QD-UBND dated 28/12/2012 |
| Dien Bien | k=1 for native forest and k=0.9 for plantation forest | QD 57/QD-UBND dated 29/1/2013 |
| Hoa Binh | K=1 for natural forest and K=0.8 for plantation forest | |

Source: Interviews with four provincial FPDFs

measurement and K4 is seen as being rather vague on the definition of difficulty of forest protection. For example, the distance could be taken into account, but forest that is adjacent to residential areas will be more exposed to forest violations and forest that is far from residential areas, could require more efforts and higher transportation costs from forest owners.

5.1.8. Payment use

In Son La, Pham et al. (2014) found that local communities used PFES payment for a wide range of purposes (Table 13). However, interviews conducted with provincial authorities in all four provinces also indicated similar patterns in their provinces. Each of them also revealed different implication for effectiveness, efficiency and equity outcome of PFES.

The rest of Section 5 provides more information for each province.

5.2. Lai Chau

Lai Chau is located upstream of Da River and plays an important role in regulating water for Hoa Binh hydropower, Son La hydropower and other hydropower stations as well as water supply firms. PFES has been implemented in Lai Chau since 2012 and 436,645.79 ha of forest is

currently paid by PFES. PFES payment is distributed to 10 FMBs and district forest ranger stations, including 992 communities and 68,625 households. PFES contributes to 65% of total investment for the province. There are six hydropower plants contributing to Lai Chau FPDF, but 90% of around VND 210 billion for 2015 came from national level as a contribution of Hoa Binh and Son La hydropower.

Lai Chau PPC issued Decision No. 1023/QD-UBND dated 30/7/2009 on the establishment of Lai Chau PFES fund and Decision No. 1143/QD-UBND dated 29/9/2011 to revise Decision No. 1023/QD-UBND. According to this, Lai Chau PFES fund was renamed to *Lai Chau Provincial Forest Protection and Development Fund* (Lai Chau PPDF) under the management of Lai Chau DARD. On 23 December 2011, the provincial government released Decision No. 42/2011/QD-UBND about introducing regulation, operation and running of Lai Chau FPDF. Following this decision, Lai Chau FPDF management council, checking board, and fund management board were set up to manage and support the activities of Lai Chau PPDF. To enforce the PFES payment process, the Lai Chau people's committee issued Decision No. 353/QD-UBND dated 12/4/2012 about establishing a steering committee for a forest protection and development plan and implementation of PFES in Lai Chau province in the period 2011–2020. With the purpose of introducing specific activity for PFES

Table 13. Payment use in four provinces.

| Options | Effectiveness | Efficiency | Equity |
|---|---|---|--|
| Payments made to forest protection groups | Incentives for regular patrolling activities | Low level of payment | Few villagers can benefit |
| Common assets for community hall | Enhances community collective action | Does little to support the community's economic development | All villagers can benefit |
| Building infrastructure | Support livelihood development; reduce pressure on forest | Payments might not be sufficient to cover the costs of infrastructure | All villagers can benefit |
| Equal payments to all households | Enhances villager's responsibility; reduce elite capture | Low level of payment | All villagers can benefit (performance-based?) |
| Microcredit and livelihood strategies | Livelihood development; reduce pressure on forests | A small number of households can benefit | Criteria to classify "poor" households |

Source: Pham et al. (2014)

implementation, socialization, forest protection and environmental protection, Lai Chau PPC adopted Decision No. 632/QD-UBND dated 11/6/2012 in Implementing Decree No. 99/2010/ND-CP dated 24/9/2010 about PFES in Lai Chau province with five main steps: (i) completing institutional and organizational arrangements for PFES at provincial and district levels; (ii) mapping, listing and making contracts with forest environmental users; (iii) listing and mapping forest owners according to catchment; (iv) making plan for receiving PFES revenue and PFES payment distribution; and (v) making contracts with forest owners and making payments. For improving management of PFES payment, the authority released Decision No. 36/2014/QD-UBND dated 27/11/2014 about management and implementation of PFES from hydropower companies that used water from Lai Chau catchment. According to this, each village will set up a team for management and contribution of PFES payments. The payment will be sent to villages and all members of villages will make a joint decision on how to use the budget.

According to the interviewees in Lai Chau, there is a strong political commitment to and support for PFES. An innovative approach emerged for both provincial operation and payment distribution. For example, according to Decree 99, a list of ES providers must be approved by Provincial People's Committees. However, in the Lai Chau case, provincial FPDF after obtaining the list from Department of Planning and Investment and Department of Trade can contact ES buyers directly. The 10% operation costs for provincial FPDF is also used to develop different livelihood models and infrastructural development throughout the provinces. According to provincial FPDF, 20% of the management fee is used for development of alternative livelihood models. The fact that the number of ES providers are small in Lai Chau also makes for low transaction costs for disbursement of PFES. The Provincial Fund has permanent full-time staff who are responsible for managing PFES. However, under the current tenure regime, where households are only allocated a small area of forests and most forests belong to FMBs, households do not have strong incentives to protect forests as they just act as labor providers.

During the period 2012–2013, the Fund distributed PFES payment to the forest protection and management board and the forest protection management board distributed money to individual households through meetings organized at Commune People's Committee hall and individuals with their ID card came and collected money. Since 2014, the provincial government issued a new regulation whereby the province also gives more ownership and leadership to communities to manage their own PFES; they can collectively use it for larger investment, not individual payments with small amounts of payment. Under this regime, the Fund will distribute the money to the head of village and the head of village should organize a village meeting to decide how the money should be distributed and used. However, according to Phong Tho Forest Protection Management Board, the capacity at village level to manage PFES funds is very limited so commune leaders had to organize meetings and prepare all financial receipts, reports and the Fund also has to organize additional training for village leaders, which meant the transaction cost to disburse PFES was high.

As PFES is the largest source of financial aid to the provinces, the money is also diverted to other development investments such as infrastructural development based on provincial need. This also leads to the question whether PES is a performance-based policy or simply another social development program. There is a reluctance to carry out strong law enforcement for hydropower plants as the total PFES revenue would be reduced due to a reduction in their number, revenue and willingness to participate. There is a conflict of interest among government agencies; provincial FPDF and DONRE support rubber development while DARD interviewees expressed their strong objection to rubber. The M&E protocol is unclear so M&E is almost absent. According to Lai Chau FPDF (2015), an additional barrier to PFES implementation in Lai Chau is the fact that many hydropower plants such as Chu Va 12 Hydropower Plant have not yet submitted a list of declared profits.

In terms of the benefit-sharing mechanism, provincial FPDFs send money to FMBs pay by cash to the community, community uses and shares money based on a community agreement and gives payment documents to the FMB (Figure 2).

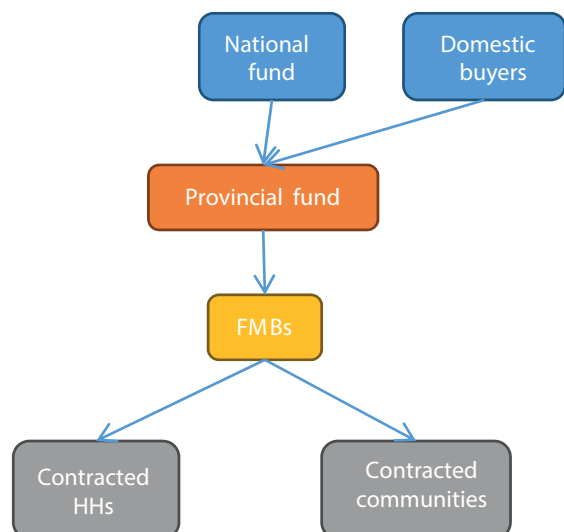


Figure 2. BSM in Lai Chau

Source: Pham et al. (2016)

According to Decree 99, the provincial list of buyers has to be approved by PPCs. Yet, the process, according to FPDF interviewees is time-consuming and unnecessary. As the result, the province skips that step and only works directly with the Department of Trade to collect the list of hydropower plants and sign contracts with them. In Lai Chau, rubber companies also received PFES payment as the Fund perceives rubber as multifunctional trees. In other provinces, IC forests are not paid by PFES as these plantations do not meet the definition of forests. However, in Lai Chau, these types of forests are under the PFES scheme, which encourage local people to restore and reforest bare land.

5.3. Dien Bien

Dien Bien is located upstream of three main rivers in Vietnam known as Da River, Ma River and Mekong River which regulate the two biggest hydropower dams in the country (Hoa Binh and Son La Hydropower). The province has 10 districts, of which seven districts have 242,304 ha in watershed area of Da River, three districts with 59,679 ha in the watershed area of Ma River and five districts with 29,264 ha located in the watershed of small hydropower plants within the province. Dien Bien FPDF was set up in 2012 according to Decision No. 134/QD-UBND dated 08/3/2012 of Dien Bien PPC and has 16 staff members to date. The Fund received budgets from

the national fund from 2012 and started to pay forest owners in 2013.

In 2015, the Fund received VND 192,152 million and has already used 73.5% of this budget up to 15/12/2015. There are 15 forest environmental services buyers, including 11 buyers inside provinces and four buyers outside. Six buyers are water suppliers and eight buyers are hydropower companies. According to a 3-year working summary report of the Dien Bien PFES fund, the PFES in Dien Bien received commitment from 605 forest owners (including 307 households, 429 communities) and the participation of 24,806 households in forest protection in 2013. The FPDF interviewees claimed that the payment from PFES significantly contributed to the income of forest owners, especially poor farmers. In 2013, on average, each household protects 10 ha of forest and received about VND 4,450,000/year. Provincial political commitment for PFES is high and forest protected areas eligible to receive PFES payments will increase from 335,238 ha (2014) to 423,113 ha in 2020 as provincial planning indicates.

To implement PFES in Dien Bien, the Dien Bien PPC introduced Plan No. 559/KH-UBND dated 22/4/2011 about implementing Decree No. 99/2010/NĐ-CP and Decision 2284/QĐ-TTg of prime minister; Decision No. 362/QĐ-UBND dated 26/4/2011 about setting Steering Board for implementing PFES payment in Dien Bien province. Recent policies approved related to PFES include Plan No. 128/KH-UBND dated 13/7/2012 about examining PFES providers for Da River catchment; Plan No. 388/KH-UBND about checking, completed procedure for land and forest allocation, handling forest certification in the period 2013–2015; Decision No. 35/QĐ dated 18/01/2013 approved plan for PFES received and payment in 2012 and 2013; Decision No. 57/QĐ-UBND dated 29/01/2013 about introducing K factor; Decision No. 62/QĐ-UBND dated 31/01/2013 approved list of FES users in 2011, 2012 and 2013; Decision No. 766/QĐ-UBND dated 2/10/2013 about the area of catchment for hydropower and water supply.

The Dien Bien FPDF is working under the regulation of Decision No. 397/QĐ-UBND dated 14/5/2012 about the regulation, operation and working of the PFES fund. Dien Bien PPC

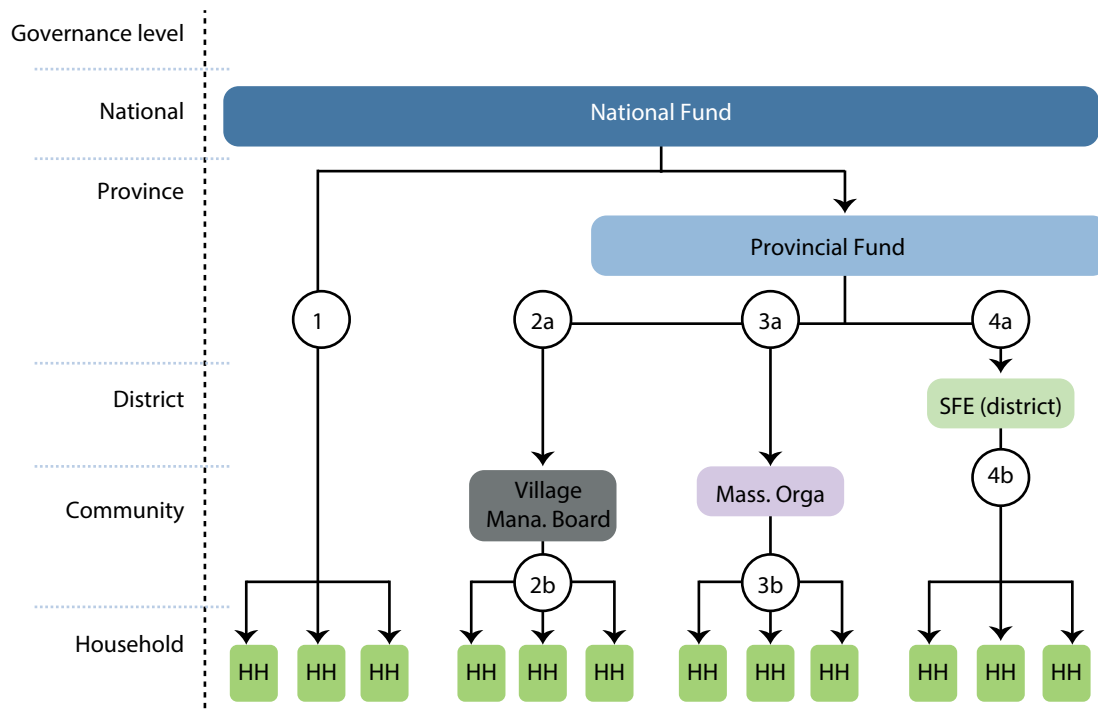


Figure 3. BSM in Dien Bien.

Source: (Le et al. In press)

assigned DARD according to Decision No. 196/QD-UBND dated 08/4/2013. At district level, a steering committee of FLA and examining ES providers were set up and a forest protection station at district level was nominated to deal with forest area and forest quality of households and communities according to Decision No. 691/QD-UBND dated 06/9/2013.

Despite political support, implementation of PFES in Dien Bien was constrained by numerous factors. First, the progress of FLA is slow. Only 176,440.33 ha out of 280,239.76 ha have been allocated for household and community up to the end of 2015 (DONRE 2016). Previous FLAs were not completed and there are inconsistencies between hard copy data and actual data in the field leading to difficulty in evaluating PFES areas. Second, according to all interviewees in Dien Bien, payment value might not reflect the ES value of forests, leading to the problem of “the tragedy of the commons”.⁶ Third, environmental services

buyers in the province often delay payment to the Fund, but there is no penalty applied. Fourth, there are different payment values in different catchments inside the province, the payment process is passive and depends on the budget obtained at the end of the year.

In terms of the benefit-sharing mechanism, provincial FPDFs kept less than 15% for management fee and reserve fund. Forest owners received 85% of PFES payment from provincial level. For households and communities who had a contract to protect forest with FMBs, FPDF paid 85% of budget to the FMB; 10% of this money was kept by the management board for management fee and the rest (90%) was paid by cash to the community. Communities made decisions on how to use the PFES money and provided payment documents to the FMB for assessment (Loft et al., In press [Figure 3]).

Le et al. (In press) found major challenges for PFES payment distribution in Dien Bien: (i) both service providers and suppliers had limited information on PFES and the process of contractual arrangements; (ii) decision-making on PFES payment and utilization was made solely by

⁶ Local ES providers receive a uniform level of PFES payments per each hectare regardless of the ES value of forests. At the current stage, the M&E system to monitor ES is still underdeveloped; hence, payment value might not reflect the ES value of forests.

the head of village with limited involvement of local people; (iii) people preferred to have equal distribution leading to low economic benefits gained and hence limited willingness to participate in PFES.

Le et al. (In press) also found that in Dien Bien, PFES payment was used to pay for forest protection groups, organizing village annual meetings and parties, livelihood development activities, for investment in infrastructure and distributed equally among households.

Loft et al. (In press) found that local perceptions of equitable benefit distribution corresponded to the egalitarian understanding of fairness. However, this distributional equity principle was influenced by the degree of transparency of the process and information on payment distribution. However, Le et al. (In press) found that the information on PFES contract and conditionality was not clearly disseminated to local people nor well understood by these groups. The local communities preferred to have a system of distribution of PFES based on input.

In addition, according to Dien Bien FPDF (2015), other barriers that have impeded the PFES implementation include:

- Guiding documents for spending reserve fund are inconsistent and difficult to implement
- The difference between the payments rates in different watersheds creates a sense of inequity among minority ethnic beneficiaries
- Most staff in provincial FPDF are part-time with unclear employment packages hence the human resources are not stable
- Review and approval of forest owners, and forest acceptance have been slow in some districts directly slowing the disbursement process.

5.4. Son La

Son La together with Lam Dong, is one of two pilot provinces of the PFES program in Vietnam operating since 2008. With the existence of two large-scale ecosystem service users known as Lai Chau and Hoa Binh Hydropower Plants and a large area in the Da River watershed, Son La yields significant annual PFES revenue (more than USD 5 million per year). PFES has significantly

contributed to rural development (e.g. PFES payments contributed to the construction of approximately 1000 construction sites (village roads, water-pumping systems, etc.) with a total payment of around VND 15 billion/year. Son La FPDF was established under Decision No. 535/QD-UBND dated 8/6/2009 by Son La PPC. The operation of FPDF was set up early and the capacity of the staff has been enhanced over the last 5 years. Cooperation among provincial agency lines is in place (FPDF in collaboration with DARD, district People's Committee, forest rangers, etc.).

Son La provincial authorities are quite active in terms of providing a legal framework for PFES implementation in the province. According to a Son La FPDF interviewee, due to a large number of forest owners in an isolated area, PFES payment distribution needs a number of local officers from district to commune level requiring regulation of cost norms to support and maintain this force (Decision 838/QD-UBND dated 22/4/2015). Son La is also the leading province in initiating a provincial policy on a benefit-sharing mechanism. Decision 1853/QD-UBND provided guidance on PFES payment use by communities. The process on how local communities decided to spend PFES payment is shown in Figures 4 and 5. The province also plans to group the individual forest owners (encourage individual forest owners to contribute their PFES payments to the community for collective use) and promote a community-based approach (pilot model in Chieng Co province) for sustainable forest management.

The number of forest owners in Son La is high (more than 64,000), their distribution is scattered, and the task of payment distribution is challenged by high transaction costs. PFES implementation used to involve around 3500 staff from provincial to local level, which led to high operation costs. Currently, Son La FPDF, after refinement, has over 65 staff members with 10 sub-FPDFs at district level as it became the biggest FPDF in the country. In addition, because Son La has too many forest owners and each forest owner might only own a very small forest area (less than 1 ha), the payments to those forest owners are too slow and thus, the impacts of PFES on environmental and livelihood outcomes are unclear.

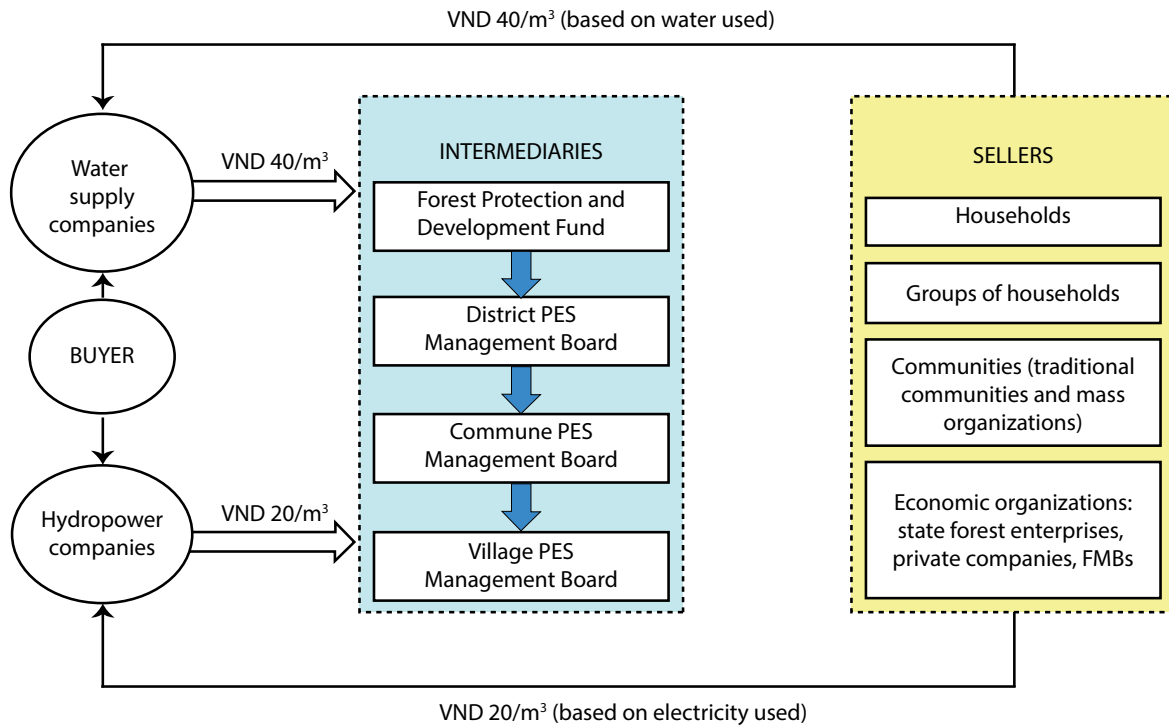


Figure 4. BSM in Son La.

Source: Pham et al. (2014)

If forest owners are organizations, Son La FPDF transfers PFES payment directly to their bank account; these forest owners will distribute money to contracted households and communities under a forest protection agreement. The contracted households and communities live within or adjacent to forests (this also applied for special use forest). If forest owners are individual households and communities, the provincial fund will transfer the money to district and commune units to distribute (in cash) to households.

Pham et al. (2014) also mentioned the decision-making process in the village as shown in Figure 5 below:

Son La FPDF (2015) also highlighted the following additional barriers for PFES implementation:

- The forest area is big and scattered, terrain is fragmented, and there are many, small forest

owners which means higher costs for payment, acceptance and disbursement of PFES.

- Regulation of PFES according to water basins (watersheds) has many shortcomings, creating different levels of payment in the same province, district and commune. Forest owners are paid differently (or are not paid), because payment levels depend on the number of ES buyers in each basin. Forest owners in Da River watersheds are being paid VND 211,000/ha/year, while in Ma River it is VND 9300/ha/year. A mechanism to bundle different sources (for example, combining PFES payment with other sources such as 30A, 57 program, etc.) is not yet in place. Moreover, the guidance on sanctions for delayed payments and forest violation act is not clear. The documents are in place but who has authority to enforce the law is not clear.
- The Fund has not mobilized any additional revenue sources beyond FES. In particular, it has not received initial support from the State

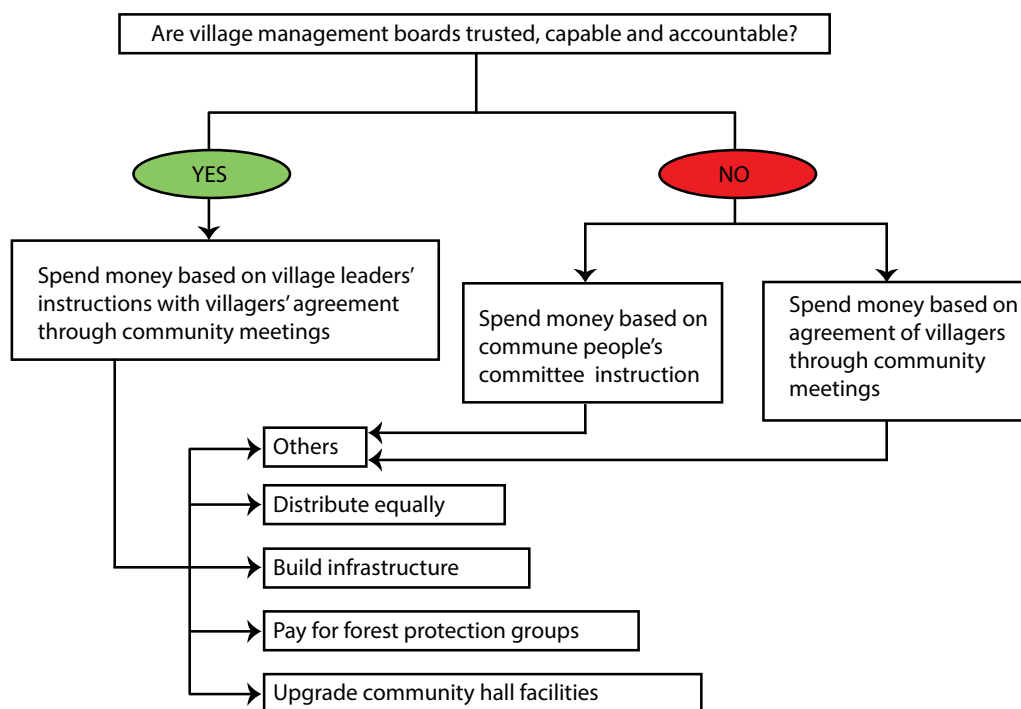


Figure 5. Decision-making process on the use of PFES payments to the village.

budget as stipulated in Decree No. 05/2008/ND-CP dated 14/01/2008 of the government.

- No guidelines for competent authorities been administratively sanctioned under the provisions of Decree No. 40/2015/ND-CP dated 27/04/2015 amending and supplementing some articles of Decree No. 157/2013/ND-CP of the Government dated 11/11/2013. This causes the levy effects for collecting outstanding PFES money and implementing this policy in Son La province.
- Ecosystem service suppliers still do not have a proper understanding of PFES. This creates risks in payment distribution. For example, there is a risk that village heads could misuse PFES payments for communities, as community members were not properly informed about PFES. Forest owners could not differentiate PFES from other forestry programs (e.g. 5MHRP), thus, it could lead to misunderstanding about who and which forest area was eligible for PFES benefits.
- Son La has a huge number of forest owners (approximately 64,000). The transaction costs

of PFES payment distribution are therefore higher than in other provinces. It also has more complex institutional arrangement as Son La is the only province, which has sub-FPDFs at district level.

- Many challenges arise from the M&E system. First, there was a lack of clear indicators for the assessment of environmental, economic and social outcomes. Second, the current guidance on M&E (Circular 20) was not comprehensive enough as it relies on a self-reporting system with irregular verification by forest rangers (maximum of 20% of forest area under PFES). Community-based monitoring systems might be more effective but they need piloted models to draw lessons learned before the expansion can take place.
- PFES has not yet maximized its potential to collect revenues. Ecosystem services such as landscape beauty is still under the table in Son La province. Thus, potential ecosystem service users (e.g. tourism companies) have not yet contributed to PFES revenues.

- The current payment levels are too low (VND 20/kWh and VND 30/m³ of water⁷) and have remained the same since 2008; thus they cannot capture the inflation rate. Payment levels should be adjustable.
- The role of DONRE in PFES implementation is not clear. FPDF relies on the Forest Protection Department (FPD) for forest verification. However, FPD is not effective, forest verification is often slow and there are long delays in the disbursement process. Furthermore, VNFF does not help with technical issues at local level so provincial FPDFs cannot implement certain guidelines under Decree 99.

5.5. Hoa Binh

Hoa Binh has implemented PFES since 2012. Hoa Binh also has a large number of forest owners due to early completion of FLA who are eligible to receive PFES payments, at around VND 12,000. An informant from Hoa Binh FPDF stated that Hoa Binh FPDF only follows the policies and guidance from central level (i.e. from DARD and VNFF) while Hoa Binh's PPC is not active in promulgating provincial policies to support PFES. Overall, Hoa Binh's PPC only issued one policy to support the establishment of Hoa Binh FPDF (Decision 2642/QD-UBND dated 31/12/2011 by Hoa Binh's PPC) and approve Hoa Binh FPDF's work plans.

Compared with the other three provinces, Hoa Binh is quite advanced in term of the introduction of ES under PFES. Except for watershed protection services, landscape beauty services are also paid by tourism companies by direct payment.

The total amount of PFES payments in Hoa Binh is relatively low compared with other provinces in the northwest; it varies in the range of VND 11–13 billion per year as the forest area under Da watershed in Hoa Binh only accounts for around a third of the total forest area. Hoa Binh FPDF has a quite limited budget for operation. Thus, Hoa Binh FPDF passes on the work of payment

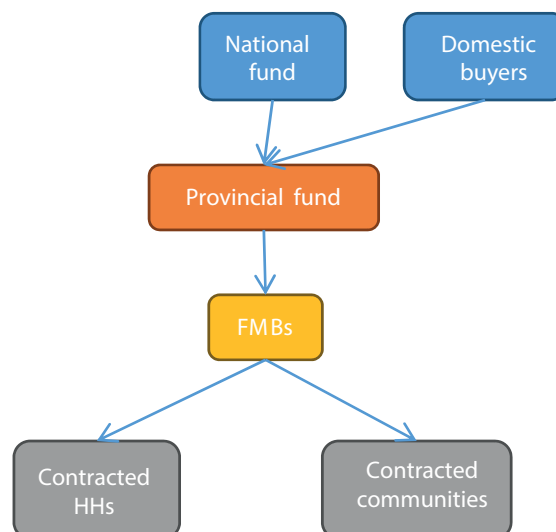


Figure 6. BSM in Hoa Binh.

Source: Pham et al. (2016)

distribution to communities and households to Da River Forest Protection Management Board. This management board is not a forest owner; it is in charge of managing a forest area under Da watershed. Hoa Binh FPDF only transfers money to the management board and then this board will redistribute it to communities and households (Figure 6).

According to provincial FPDF, there is a lack of budget for operation (only more than VND 1 billion for the operation of FPDF, much lower than Dien Bien, Lai Chau and Son La). The average payment is VND 151,000/ha/year, lower than the rate from the 661 program hence creating a risk of adverse impact. Many households receive only a small amount of payment (< USD 5, for example).

Hoa Binh FPDF (2015) highlighted several barriers for PFES implementation as follows:

- By 2015, due to a limited budget, Hoa Binh FPDF has not organized promotional activities to raise awareness in communities and society about PFES policy.
- The province has not arranged a budget for reviewing forest areas and implementing projects in the valley of hydropower plants in that funds have mainly been deducted from annual management costs of provincial FPDFs.

⁷ These rates are under revision and may be increased.

- The Fund has not been able to determine ES providers to disburse reserve funds and provincial revenues from water supply companies.
- A number of hydropower plants and water supply companies in the province have delayed paying the PFES fund causing prolonged insolvency.
- The payment of annual PFES by cash caused many risks and difficulties in implementation. Development and evaluation of direct payment schemes for tourism companies has been slow; there has been lack of guidance and poor supervision and inspection mechanisms.
- Have not thoroughly implemented the development of spending rules on the autonomous mechanism of annual budget according to Decree No. 15/2015/ND-CP.

6 Key issues and recommendations

Consultations with provincial authorities and literature review indicate numerous knowledge gaps that need to be further studied and addressed.

6.1. Key issues and recommendations for PFES

- The environmental, economic and social impacts of the PFES program remain unclear. All government interviewees asserted the need to carry out such a study to report to both buyers and sellers.
- Several REDD+ pilot projects (e.g. Dien Bien), CDM (e.g. Hoa Binh), pilot benefit-sharing mechanism and participatory forest monitoring (e.g. Dien Bien) have been implemented in studied provinces for a few years with the aim of supporting policy development. Yet, the effectiveness of these proposed mechanisms developed by those projects is unknown. Carrying out evaluation and lessons learned from the implementation of those projects provide a solid evidence for policy makers to uptake lessons learned and the model proposed by the previous project proponent.
- The case of direct payment in Hoa Binh opens a new way of implementing PFES. Yet, the extent this can help to enhance PFES effectiveness is still questionable and future study could certainly address those knowledge gaps.
- Migration and shifting cultivation are not only the main drivers of deforestation and forest degradation in the four provinces studied but are also social and political issues. To what extent migration/shifting cultivation can reinforce or remedy D&D, the equity discourse on who should benefit from PFES and REDD+, and what benefit-sharing mechanism should be designed to capture those dynamics, all remain unclear.
- Who benefits from PFES? Local people or hydropower plants? All hydropower plants in

all provinces delay the payment to the Fund so they can use this financial capital for their own business.

- Is PFES a performance-based mechanism for enhancing ES or a social development program? Provincial funds use its 10% for their management costs to contribute to rural development (e.g. infrastructure development for FMBs, schools for children based on provincial needs and development of models for agriculture production). PFES is not a social and rural development program and such payment should be reinvested in sustainable forest management. How do provincial authorities aim to balance these two objectives and what is the government view/policy?
- In Dien Bien, currently the hydropower plant's payment of compensation for forest loss is transferred to the Dien Bien FPDF. However, while the payment is small, high transaction costs for transfer of funds to management boards to carry out the reforestation activities and paperwork involved have created fewer incentives for boards to manage the Fund. In addition, Sub-Department of Forest Protection and Sub-Department of Forestry also expressed their concern about the lack of available land for reforestation. Unclear benefit-sharing mechanism have hampered the actual implementation of this policy.

6.2. Key issues and recommendations for FLA

- In all four provinces, communities are managing more than half of the forest area. In other words, half of the PFES payment is currently paid to communities. However, how communities have used PFES payments and their impact on forest protection is unknown.

- Grouping individual and household forest owners to make a cooperative for effective organization of PFES payment is now in place in Son La as this can reduce the work for the management board of FPDF in delivering PFES payment and encourages community-based forest management. However, how this model should be best operated, and the legal barriers on land-use rights to promote this initiative, are unclear.
- Trade-offs exist between equity, effectiveness and efficiency. The fact that only eight FMBs are PFES recipients in Lai Chau makes the process of payment distribution rather easy and efficient. However, what is the role of local people: labor provider or forest manager? How much forest is actually managed by HHs? This has implications for equity and effective outcomes of PFES. In Lai Chau, all forests are managed by FMBs and protected areas. The FMBs then sign annual contracts with communities and groups of HHs. How much ownership and willingness of local people to stay engaged in PFES through this model and potential conflict of interest that could arise need to be further studied. The potential benefit of PFES could also lead to local government being resistant to accelerating FLA for households and communities so that benefits, rights and power can stay with management boards.
- There is inconsistency in statistical and spatial land-use data between DARD and DONRE. This is caused by inconsistent land-use classification and out-of-date map data. A consistent land-use classification and regular updating of land allocation data are needed for effective management of land uses and forests at different levels (province, district and commune).
- Capacity building for government staff to carry out a forest inventory and forest monitoring is required. Government interviewees in all four provinces expressed their interest in following a model of FLA and forest monitoring established in Dien Bien by JICA. Better information and knowledge exchange among four provinces is essential.

7 Policy gaps in PFES and REDD+

Monitoring and evaluation. A clear monitoring and evaluation (M&E) mechanism for environmental, social and economic outcomes for PFES is needed to guide provincial authorities. Capacity building for local staff and for local people in monitoring financial and social impacts is needed as the provincial authorities have highlighted that this has been overlooked. Moreover, a poor database for PFES has impeded the management of the PFES program. In all four provinces there is no application of GIS linking statistics to spatial information for PFES implementation. Such a database is urgently needed to monitor the effectiveness of PFES implementation. Capacity building and information exchange among the four provinces can also help to address this gap. Moreover, there is no clear guidance on how to use the 10% of PFES money by FPDF. Yet, different provinces have used it differently. No strategic investment for forest activities has been made as the management costs mainly cover staff time, capacity building and awareness raising and infrastructural development. The role of FPDF is just to deliver the payment to forest owners, while other important roles such as promoting funds from donors, supporting improvement of crop production, dissemination of best practices, etc. are not considered by the provincial funds. Strategic planning on how PFES should be used to address the underlying drivers of deforestation and forest degradation and improve the overall performance of provincial forestry section is essential.

Law enforcement. Law enforcement is a challenge in all four provinces. Different provincial government agencies have different views on and interests in how policies should be enforced, resulting in weak law enforcement, weak coordination and conflict among stakeholders. For example, Lai Chau FPDF interviewees asserted that hydropower plants often delayed paying

PFES fees to the Fund. A hydropower plant is required to pay VND 4 billion but so far only paid VND 900 million. Despite Decision 40 on penalty for late payment, the interviewee from Lai Chau FPDF admits that the penalty is too low compared with interest rate payment and financial capital the hydropower plants could get if they delay the payment. While the FPDF sees the need to strengthen the legal framework for law enforcement, the Department of Forestry interviewee suggested that light law enforcement would work better. According to this interviewee, the province wants to attract more investment into the province and should ensure that these hydropower companies can operate and generate tax as well as collect PFES money to transfer to the Fund. As the result, the interviewees did not see the need to improve the law enforcement policies and current protocols. All interviewees were unclear on the obligations and responsibilities of each individual government agency in penalizing late payment. None of those government agencies had a clear idea of who should act as the lead agency in penalizing a late payee, or how a penalty should be collected and used. Law enforcement applied for ES providers is also weak. Government agencies interviewed were all reluctant to apply sanctions to poor, ethnic and marginalized groups in order to avoid social unrest and to ensure national border security.

Different views on eligible payees in different provinces lead to inconsistent policy implementation throughout the country. For example, in Lai Chau, PFES payment is transferred to rubber companies as the province follows MARD's guidance on rubber as multipurpose trees. However, in Dien Bien, according to the Dien Bien FPDF, DARD and the provincial fund have sent a letter to VNFOREST to seek advice and approval on payment to rubber but VNFOREST requested not to pay for rubber, as rubber is not considered

as forest. In Lai Chau, forests classified as IC are still eligible for PFES payment while only IIA forests and above are counted in the other three provinces. This might pose the risk of inconsistency in policy implementation throughout the country and is provoking a sense of inequity among relevant stakeholders.

Bundling multiple sources of funding to enhance forest protection outcomes. While the PFES payment is small in some cases (Hoa Binh for example), at the same time there are resources funded for forest protection from other programs such as follow-up of 661 (Decision 57, new

rural program, 30a and others), but there is no coordinating mechanism for such resources for better forest management.

Institutional arrangements. There is inconsistency among the provinces on whether FPDFs are under PPC or DARD (e.g. Lai Chau and Son La FPDF are placed under DARD while Hoa Binh FPDF under PPC). It is suggested by interviewees in Son La that FPDFs should be placed under DARD as DARD has better expertise for implementation. Moreover, it can reduce the complexity of the approval process.

References

- Dien Bien [DARD]. 2015. *Reporting on status of forests in 2014*. Government report. Dien Bien province, Vietnam.
- Dien Bien [FPDF]. 2015. *Report on summing-up of work in 2015 and plan of work for 2016*.
- Dien Bien Forest Protection Department [FPD]. 2015. *Statistical report on forest protection and development in Dien Bien*. Dien Bien province, Vietnam.
- Dien Bien Statistical Office. 2014. *Dien Bien Statistical Yearbook 2014*. Dien Bien province, Vietnam.
- General Statistic Office of Vietnam [GSO]. 2015. *Statistical Yearbook of Vietnam 2014*. Statistical Publishing House, 2015. Hanoi, Vietnam
- Hoa Binh Communist Party. 2015. *Resolution of the XVI Hoa Binh Party Congress, the term 2015 – 2020*. Government report. Hoa Binh province, Vietnam.
- Hoa Binh [DARD]. 2015. *Reporting on status of forests in 2014*. Hoa Binh province, Vietnam.
- Hoa Binh [FPDF]. 2015. *Report on summing-up of work in 2015 and plan of work for 2016 of Hoa Binh Forest Protection and Development Fund*. Hoa Binh province, Vietnam.
- Hoa Binh Forest Protection Department [FPD]. 2015. *Statistical report on forest protection and development in Hoa Binh*. Hoa Binh province, Vietnam.
- Hoa Binh Statistical Office. 2014. *Hoa Binh Statistical Yearbook 2014*. Hoa Binh province, Vietnam.
- Lai Chau [DARD]. 2015. *Reporting on status of forests in 2014*. Lai Chau province, Vietnam.
- Lai Chau [FPDF]. 2015. *Report on summing-up of work in 2015 and plan of work for 2016*. Lai Chau province, Vietnam.
- Lai Chau Statistical Office. 2014. *Lai Chau Statistical Yearbook 2014*. Lai Chau province, Vietnam.
- Lai Chau Forest Protection Department [FPD]. 2015. *Statistical report on forest protection and development in Lai Chau*. Lai Chau province, Vietnam.
- Le, ND, Tjajadi, JS, Loft, L, Pham, TT, Wong, G. In press. Being equitable is not always fair: an assessment of PFES implementation in Dien Bien, Vietnam. CIFOR Working Paper. Bogor, Indonesia: CIFOR.
- Loft L, Le ND, Pham TT, Yang A, Tjajadi JS and Wong G. In press. Whose equity matters? National to local equity perceptions in Vietnam's payments for forest ecosystem services scheme. Submitted to Ecology Economics.
- Pham TT, Bennett K, Vu TP, Brunner J, Le ND and Nguyen DT. 2013. *Payment for forest environmental services: from policy to practice*. Occasional Paper 93. Bogor, Indonesia: CIFOR.
- Pham TT, Moeliono M, Brockhaus M, Le ND, Wong G and Le MT. 2014. *Local preferences on PFES payments distribution in Son La: Lessons for REDD+*. *Human Ecology* 42(6):885.
- Son La [FPDF]. 2016. *Report on sharing experience for payment distribution method under PFES program in Son La*. Draft report. Son La, Vietnam.
- Son La [DARD]. 2015. *Reporting on status of forests in 2014*. Government report. Son La province, Vietnam.
- Son La [FPDF]. 2015. *Report on summing-up of work in 2015 and plan of work for 2016*. Government report. Son La province, Vietnam.
- Son La Forest Protection Department [FPD] 2015. *Statistical report on forest protection and development in Son La*. Son La province, Vietnam.
- Son La Statistical Office. 2014. *Son La Statistical Yearbook 2014*. Son La province, Vietnam.
- [VNFF]. 2016. *Report on summing-up of work in 2015 and plan of work for 2016*. Hanoi, Vietnam.
- [VNFF]. 2015. *Report on the implementation of PFES policy as stipulated in Decree No. 99/2010/ND-CP dated 24/09/2010, period of 2011–2014*.

Annexes

Annex I. Forest land status by use purpose in the four provinces (up to 31 December 2014)

| Province | Forest use purposes | | | Forested land (ha) | | Sub-total | Non-forested land (planned for forestry) (ha) | Total (ha) |
|-----------|---------------------|----------------------|--|----------------------|--|-----------|---|------------|
| | Natural forest | Plantation forest | Plantation of industrial and specialty trees | Plantation forest | Plantation of industrial and specialty trees | | | |
| Lai Chau | Special use forest | 28,228 | 0 | 0 | 0 | 28,228 | 13,047 | 41,275 |
| | Protection forest | 215,032 | 9,057 | 0 | 0 | 224,090 | 140,385 | 364,474 |
| | Production forest | 145,460 | 9,067 | 12,571 | 0 | 167,098 | 192,726 | 359,824 |
| Dien Bien | Special use forest | 74,674 | 376 | 0 | 0 | 75,050 | 40,978 | 116,028 |
| | Protection forest | 151,502 | 1,520 | 0 | 0 | 153,022 | 182,216 | 335,239 |
| | Production forest | 156,969 | 14,682 | 1,043 | 0 | 172,693 | 135,792 | 308,485 |
| Son La | Special use forest | 49,719 | 1,101 | 0 | 0 | 50,821 | 18,168 | 68,988 |
| | Protection forest | 337,403 | 7,227 | 647 | 647 | 345,278 | 131,573 | 476,851 |
| | Production forest | 220,043 | 15,496 | 603 | 603 | 236,143 | 142,628 | 378,771 |
| Hoa Binh | Special use forest | 33,347 | 1,458 | 0 | 0 | 34,805 | 5,295 | 40,100 |
| | Protection forest | 80,673 | 21,634 | 2 | 2 | 102,309 | 26,518 | 128,828 |
| | Production forest | 17,057 | 84,986 | 144 | 144 | 102,187 | 54,874 | 157,061 |

Annex II. Forest land status by district in the four provinces (up to 31 December 2014)

| Province/ District | Total area (ha) | Forested area (ha) | | | Non-forested area planned for forestry (ha) | Forest cover rate (%) |
|----------------------|--------------------|--------------------|------------------------|---------------------------|---|-----------------------------|
| | | Sub-total | Natural forest area | Plantation forest area | | |
| I. Lai Chau | 906,879 | 419,448 | 388,721 | 30,728 | 346,158 | 45.0 |
| - Tam Duong | 68,452 | 33,754 | 30,222 | 3,532 | 20,315 | 48 |
| - Lai Chau City | 7,077 | 1,588 | 1,456 | 132 | 1,006 | 22 |
| - Tan Uyen | 89,733 | 27,831 | 22,821 | 5,010 | 47,845 | 28 |
| - Than Uyen | 79,253 | 25,916 | 20,358 | 5,559 | 36,135 | 29 |
| - Phong Tho | 102,925 | 51,071 | 47,670 | 3,401 | 28,459 | 49 |
| - Sin Ho | 152,696 | 51,802 | 41,179 | 10,623 | 52,946 | 32 |
| - Muong Te | 267,934 | 163,277 | 163,145 | 132 | 98,520 | 61 |
| - Nam Nhun | 138,808 | 64,209 | 61,870 | 2,338 | 60,932 | 45 |
| II. Dien Bien | 956,290 | 400,766 | 383,145 | 17,620 | 358,986 | 41.1 |
| - Dien Bien Phu City | 6,427 | 2,487 | 1,509 | 978 | 1,965 | 36 |
| - Dien Bien | 163,926 | 68,267 | 65,115 | 3,152 | 52,972 | 41 |
| - Dien Bien Dong | 120,898 | 32,815 | 32,406 | 409 | 38,821 | 27 |
| - Muong ang | 44,352 | 11,259 | 9,649 | 1,609 | 13,774 | 23 |
| - Tuan Giao | 113,777 | 44,470 | 41,191 | 3,280 | 50,488 | 38 |
| - Tua Chua | 68,526 | 28,608 | 27,739 | 869 | 25,565 | 41 |
| - Muong Lay | 11,256 | 5,269 | 4,164 | 1,105 | 3,402 | 47 |
| - Muong Cha | 119,942 | 52,719 | 50,148 | 2,571 | 58,998 | 43 |
| - Nam Po | 149,813 | 61,787 | 60,286 | 1,501 | 64,299 | 40 |
| - Muong Nhe | 157,373 | 93,085 | 90,939 | 2,146 | 48,702 | 58 |
| III. Son La | 1,417,440 | 633,714 | 608,441 | 25,273 | 293,183 | 44.7 |
| - Bac Yen | 110,371 | 43,132 | 42,474 | 658 | 29,322 | 39 |
| - Mai Son | 143,245 | 55,817 | 53,121 | 2,696 | 27,146 | 39 |
| - Muong La | 142,924 | 76,301 | 74,308 | 1,993 | 14,481 | 53 |
| - Moc Chau | 108,166 | 45,253 | 44,194 | 1,058 | 15,976 | 42 |
| - Phuc Yen | 123,655 | 52,991 | 49,830 | 3,160 | 21,815 | 43 |
| - Quynh Nhai | 106,090 | 49,301 | 48,217 | 1,085 | 28,120 | 47 |
| - Song Ma | 164,616 | 59,991 | 58,769 | 1,222 | 25,339 | 36 |
| - Sop Cop | 148,088 | 74,403 | 73,188 | 1,215 | 48,723 | 50 |
| - Thuan Chau | 153,873 | 68,683 | 64,178 | 4,504 | 47,568 | 45 |
| - Son La City | 32,491 | 16,602 | 13,781 | 2,822 | 5,198 | 51 |
| - Van Ho | 97,984 | 47,436 | 44,789 | 2,647 | 21,783 | 47 |
| - Yen Chau | 85,937 | 43,804 | 41,592 | 2,212 | 7,712 | 51 |

| Province/ District | Total area (ha) | Forested area (ha) | | | Non-forested area planned for forestry (ha) | Forest cover rate (%) |
|---------------------|-----------------|--------------------|---------------------|------------------------|---|-----------------------|
| | | Sub-total | Natural forest area | Plantation forest area | | |
| IV. Hoa Binh | 460,869 | 242,802 | 132,100 | 110,702 | 95,811 | 50.0 |
| - Cao Phong | 25,528 | 8,098 | 3,803 | 4,295 | 9,474 | 31 |
| - Kim Boi | 54,951 | 30,047 | 15,298 | 14,748 | 12,101 | 48 |
| - Ky Son | 21,008 | 11,201 | 2,096 | 9,106 | 4,228 | 48 |
| - Luong Son | 37,708 | 16,777 | 2,977 | 13,800 | 6,676 | 39 |
| - Lac Son | 58,746 | 32,948 | 18,231 | 14,716 | 7,440 | 51 |
| - Lac Thuy | 31,495 | 19,724 | 9,126 | 10,598 | 2,404 | 58 |
| - Mai Chau | 57,128 | 35,343 | 28,822 | 6,521 | 13,822 | 61 |
| - Hoa Binh City | 14,443 | 6,161 | 1,405 | 4,756 | 2,717 | 38 |
| - Tan Lac | 53,205 | 29,189 | 19,805 | 9,385 | 7,169 | 52 |
| - Yen Thuy | 28,861 | 13,566 | 6,218 | 7,348 | 3,525 | 42 |
| - Da Bac | 77,796 | 39,748 | 24,319 | 15,429 | 26,254 | 49 |

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This report originates from a joint collaborative project between the Center for International Forestry Research (CIFOR) and the Japan International Cooperation Agency (JICA). The objective of the study is to assess the current status of forest land allocation (FLA) and Payments for Forest Environmental Services (PFES) in four northwestern provinces of Vietnam: Son La, Dien Bien, Lai Chau and Hoa Binh. The paper also aims to identify opportunities and constraints for FLA and PFES implementation and to highlight policy and research gaps, which, if resolved, would lead to future FLA and PFES improvement.

These four provinces share common problems in implementing FLA, such as: (i) poor database management; (ii) inconsistent data between demarcation of the area and the area registered in the land use certificate; (iii) inconsistent data between DONRE and DARD due to varying land use classification systems; (iv) out-of-date data; and (v) a lack of human resources and political interest in enforcing FLA in highly contested areas. All of these above factors have led to slow progress in PFES disbursement and difficulties in ensuring proper monitoring and evaluation of PFES outcomes.

The provincial PFES policies in four provinces focus on two areas: (i) the benefit-sharing mechanism; and (ii) the institutional settings for PFES management at district and commune levels. Among the critical areas for PFES implementation that are recognized by all four provincial authorities (but are currently overlooked in practice), are: law enforcement for late payees and clear guidance on monitoring and evaluation. Among these four provinces, only Hoa Binh FPDF encourages the direct payment method applied for landscape protection, whereby service users negotiate the fee and send their payments to service providers directly without going through the FPDF, while the other three provinces expressed interest and support for indirect payment only.

A clear monitoring and evaluation mechanism for environmental, social and economic outcomes for PFES is needed to guide provincial authorities. The impact of FLA on environmental, social and economic outcomes is mixed and conflict over forestland will hamper the implementation of PFES. Capacity building, and political and financial support are required to overcome these challenges.



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