

FACTORS AFFECTING POLICY IMPLEMENTATION OF PAYMENT FOR FOREST ENVIRONMENT SERVICES IN HOA BINH PROVINCE

Mai Quyen¹, Nguyen Phuong Le², Nguyen Thi Hai Ninh², Vu Thi Minh Ngoc¹

¹*Vietnam National University of Forestry*

²*Vietnam National University of Agriculture*

SUMMARY

The article is about implementation results of Payment for Forest Environment Service (PFES) policy and factors affecting policy implementation in Hoa Binh province. Implementation results are analyzed in terms of: services and supply boundaries of PFES; PFES payers and beneficiaries; Results of propaganda, inspection and supervision activities, results of forest areas receiving PFES money, results of collection and payment of PFES money. The paper analyzes the impact of 6 factors on the policy implementation process, including: PFES policy content; organizational structure; capacity of policy enforcement staff; resources; propaganda methods and beneficiary's characteristics. Furthermore, by using a binary logistic model to analyze how the characteristics of the household affecting enforcement, the paper finds that number of forestry workers, years of experience in forestry production, the forest area to be paid under PFES policy, implementation location, the qualifications of the household head and the household's ethnic composition have a significant impact on the policy enforcement of the households. Based on the results achieved, the research has proposed a number of solutions to improve the effectiveness of policy implementation in Hoa Binh province: Issue documents specifying policies; Policy dissemination and propaganda; Expand revenue sources with forest environment services users of ecotourism and aquaculture; Improve qualifications for the staff of the Provincial Forest Protection and Development Fund; Solutions for forest protection and development

Keywords: factors affecting, forest environment services, payment for forest environment services, policy implementation.

1. INTRODUCTION

In recent years, forest conservation and development have become a priority task in national development programs. A number of programs with the aim of protecting and developing forests have been applied, such as Program 327 (1992) aimed at "Greening bare land, bare hills"; Program 556 (1995) attempted to adjust Program 327 activities; Program 661 (1998) is called "Government program of reforestation of 5 million hectares"; Program of forest protection and development plan period 2011 - 2020 and other programs. However, these programs have not taken advantage of the payment because of the principles of payment for forest environmental services (Nguyen Thi Y Ly, 2013). Therefore, PFES has been piloted in Lam Dong and Son La provinces of Vietnam under Decision No. 380/QĐ - TTg dated April 10, 2008 by the Prime Minister. After nearly 2 years of piloting the implementation of the PFES policy, on September 24, 2010, the Government issued Decree No. 99/2010 ND-CP on PFES policy.

Vietnam has become the first country in Asia to issue and implement a PFES policy at the national level (Pham Thu Thuy et al., 2013). Officially starting to implement nationwide from January 1, 2011 according to Decree 99, PFES policy is considered as a milestone, most prominent and notable policy in Vietnam. At the conference summarizing 70 years of agriculture and rural development (November 2015), this policy was recognized as an outstanding achievement of the forestry sector in the period 2011 - 2015.

Hoa Binh has been implementing the PFES policy from 2013. By the end of 2019, the total amount of money collected from Forest Environment Services (FES) in the province was 131,351.96 million VND; the amount spent to forest owners was 93,590.82 million VND; The total forest area to be paid for FES is 122,450.28 ha (Forest protection and development fund of Hoa Binh, 2019). The PFES policy has had a positive impact on people's livelihood and awareness of forest owners.

However, the PFES implementation process in the locality still has a number of limitations, such as the payment amount for one hectare of forest is low and there is a large difference between the basins; PFES policy propaganda to users and providers of FES is limited due to lack of funding; The central and provincial budgets are very limited to support the policy activities; There is a inconsistency between the map and the actual status, making it difficult to determine the forest owner that will be paid for FES.... Therefore, it is necessary to study the factors affecting the PFES policy implementation in Hoa Binh province in order to analyze the overview of the implementing results and determine the influencing factors to propose solutions to effectively implement the policy at the province.

2. RESEARCH METHODOLOGY

2.1. Data collection

- Collecting secondary data and information

Secondary information and data are collected through: annual summary report of Hoa Binh Forest Protection and Development Fund, Annual Statistical Yearbook, data on relevance websites on what kind of information.

- Collecting primary data and information:

Da Bac district has been chosen to be study area of the paper because: It has the forest area providing FES; The number of households participating in the policy is the largest in the province. Hoa Binh city has also been chosen as the study area as it has the smallest number of forest owners being policy implementing households in the province. In Da Bac district, we chose 2 communes, which are Toan Son and Hien Luong communes; In Hoa Binh city, we chose 1 commune, which is Thai Think commune.

Table 1. Sources, contents, methods of collecting primary information and data

No.	Data collecting sources	Amount	Contents	Methods
1	FES users (hydropower plants, clean water plants)		- General information of plants. - Amount to be paid annually.	
		2	- The advantages and disadvantages of the plants when participating in the policy. - The factory's proposals on policy.	Deep interview
2	Hoa Binh Forest Protection and Development Fund	6	- Policy making process. - Status and results of policy implementation in Hoa Binh province.	Deep interview
3	Local forest rangers	3		
4	Heads of communities	5		

2.2. Data processing and analysis

All information, published data and new information and data after being collected will be synthesized and processed by Excel software, SPSS 20.0 and analyzed by methods of descriptive statistical analysis and comparative statistical analysis. In addition, the study uses the binary logistic model to quantify the effects of household characteristics on policy implementation. The dependent variable Y_i of the model takes the values $Y=0$ for poor policy enforcement and $Y=1$ for good policy enforcement. Independent variables represent household characteristics including: number of

forestry labor (X_1 : people); Years of experience in forestry production (X_2 : years); Capital invested in forestry (X_3 : million VND/year); Forest area receiving PFES (X_4 : ha); policy enforcement place (X_5 : takes value of 1 if the location is Hoa Binh city and 0 if location is Da Bac); Gender of heads of household (X_6 : takes value of 0 if the head of household is female and value 1 if the head of household is male); Qualification of the Head of household (X_7 : 1 if the qualification is elementary or below; 2 if lower secondary level and 3 if upper secondary or higher levels); Ethnicity (X_8 takes the value 0 if the household is the ethnic minority and 1 if

the household is the Kinh). The model is set up as follows:

$$\ln\left[\frac{P(Y=1)}{P(Y=0)}\right] = \beta_0 + \beta_1 X_1 + \dots + \beta_i X_i$$

(with $i=1\div 8$)

Where $P(Y = 0)$ is the probability that the policy is not enforcing well and $P(Y = 1)=P_0$ is the probability that the policy is doing well. If P_0 is considered as the initial probability, the probability of good policy enforcement is calculated by the formula $P_1 = P_0 * e^{\beta} / [1 - P_0(1 - e^{\beta})]$. The paper used the household's assessment on the PFES policy enforcement according to the following aspects: i) Evaluation of dissemination and propaganda; ii) Evaluation of the results of policy enforcement (on the evaluation aspects of PFES amount, time, procedure; form of receipt; unit price of PFES per ha annually received by the household and influence on household income). The assessment method was based on scoring the above criteria on a scale of 3 levels, which are 1 for "a little", 2 for "average" and 3 for "a lot. The final results of assessing policy enforcement will be based on the frequency of the highest occurrence of levels, poor policy enforcement if the frequency of households evaluating level 1 is greater ($Y = 0$); good policy enforcement if the frequency of households evaluating level 2, 3 is greater ($Y = 1$).

3. RESULTS AND DISCUSSION

3.1. Results of the PFES implementation in Hoa Binh

3.1.1 Defining the FES, boundary, payers and recipients of FES

Among 5 types of FES specified in Article 61 of the Forestry Law dated 2017, there are 2 types of services have been paid for in Hoa Binh, which including: Service of land protection, erosion control and sedimentation of lake, river and stream bed; and Regulating and maintaining water resources for production and social life. As of June 2019 in Hoa Binh, there are 13 basins paying for FES in 7 districts and cities, including: Da Bac, Mai Chau, Tan Lac, Lac Son, Cao Phong, Ky Son, and Hoa Binh city, with the total forest area providing FES of 122,450.28 ha.

FES payers: 9 hydropower production plants are paying for land protection services, erosion control and sedimentation of lake, river and stream beds; 3 clean water production units are paying for maintaining water sources for service production and social life.

FES recipients: By the end of 2018, Hoa Binh province has beneficiaries of PFES, including: 1 protection forest management board; 4 special-use forest management boards; 1 forestry company; 104 Community People's Committee (CPCs), 112 communities, 21,970 individual households and 20 other organizations.

The forest area receiving PFES in Hoa Binh province has not changed much over the years. In 2018, the Dinh Cu hydropower basin and the Vinaconex water plant basin were accepted and entitled to receive PFES, making the forest area receiving PFES increased by 24,610.37 ha compared to 2017.

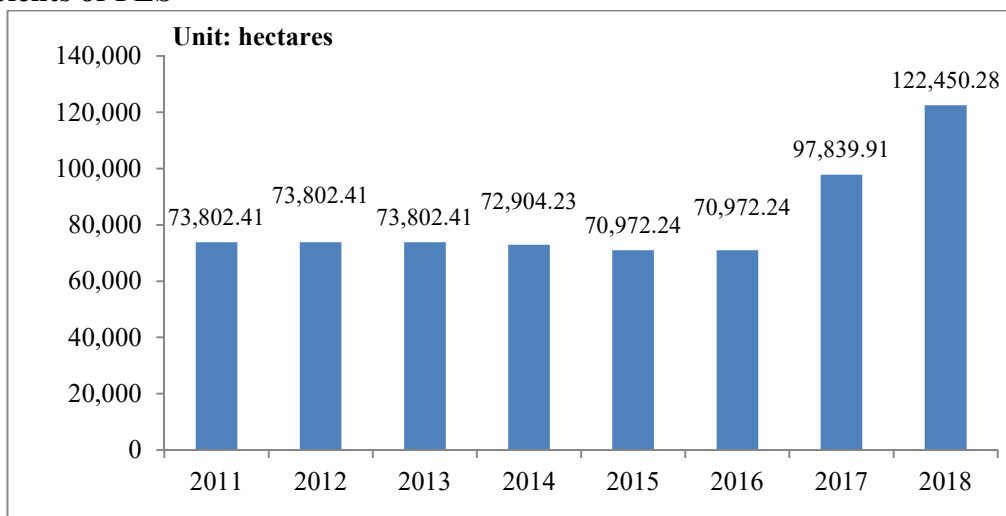


Figure 1. The forest area entitled to receive PFES by years

3.1.2. PFES propaganda activities and results

The propaganda activities on PFES in Hoa Binh province have been carried out in many forms: articles on newspapers, radio, television, posters, signs, leaflets, notebooks, wall

calendars, and conferences. All these information channels have transferred knowledge, contributed to raising awareness, strengthened capacity for agencies, units and people in policy enforcement.

Table 2. Results of PFES propaganda and training activities (as of 2019)

Forms	Unit	Amount
1. Newspaper	Papers	210
2. Radio	Times	32
3. Television	Times	30
4. Posters and signs	Pieces	1,964
5. Leaflets	Sheets	10,226
6. Newsletter and propaganda notebooks	Books	6,065
7. Calendars	Units	1,000
8. Others	-	287
9. Training courses	Courses	79
10. Workshops and conferences	Times	15

Sources: MARD (2018) & Hoa Binh FPDF (2019)

3.1.3. PFES monitoring results

Up to 2019, Hoa Binh Forest Protection and Development Fund (FPDF) has established 20 teams to inspect and supervise the policy implementation in the province, including 11 teams under the Hoa Binh FPDF and 9 interdisciplinary teams, People's Council. The content of the inspection focuses on the acceptance results of the forest area to be paid for FES by forest owners; The payment of service users; The progress of transferring PFES to forest owners; The PFES money management and use of forest owners. Due to the limited budget and the number of staff implementing monitoring, the inspection and supervision is only implemented according to the plan. Therefore, in the coming time, the Hoa Binh FPDF should strengthen sudden inspection. In addition, the monitoring content should be implemented more diversified such as checking whether the payment is made to the right forest owners; There is a dispute or not; The use of FES money is effective or not.

3.1.4. Results of collecting and payment FES

a. Revenues from FES

By the end of 2019, the PFES amount

collected by Hoa Binh province was 131,351.96 million VND, of which the Central Forest Fund collected 119,637.16 million VND, accounting for 91.08%; The Hoa Binh FPDF collected 11,714.80 million VND, accounting for 8.92%. The PFES amount collected by the Vietnam FPDF is 10.21 times higher than that of the Hoa Binh FPDF because river basins of hydropower and clean water plants are often located in many provinces. In terms of payers, the total amount collected from hydropower plants is over 33 times higher than that collected from clean water plants. But the money collected from clean water plants tends to increase over the years, which will improve the FES income of forest owners.

b. Income from FES of the forest owners

Table 3 shows the PFES amount of forest owners who are the Commune People's Committees, accounting for 39.5% of the total PFES amount of Hoa Binh province in 2018. The PFES amount received by households and individuals accounting for 34.62%. They the beneficiaries that the policy wants to target. The policy aims at making the PFES money help households improve their income, can live by

forestry and contribute to poverty alleviation. But in fact, in Hoa Binh, on average, a household only received more than 369

thousand VND in 2018. The amount is indeed too small to achieve the above-mentioned goals.

Table 3. Amount of PFES received by a forest owner in 2018

Forest owners	Amount of forest owners	Total amount of PFES paid to forest owners (VND 1000)	Amount of PFES /a forest owner (VND 1000)
1. Protection forest management boards	1	725,622.93	725,622.93
2. Forestry enterprises	1	372,074.29	372,074.29
3. Special used forest management boards	4	2,353,529.82	588,382.46
4. Households and individuals	21,970	8,115,335.84	369.38
5. Communities	112	1,534,468.35	13,700.61
6. CPCs	104	9,259,412.52	89,032.81
7. Others	20	1,079,340.20	53,967.01

Source: Hoa Binh FPDF (2019)

The contribution of PFES money to the total income of households is shown in Table 4. The contribution rate of PFES money to the income from the forest of households is quite modest, which is from 5.08% to 6.4%. The contribution rate of PFES money to the total income of the household is even smaller, only from 0.61% to 0.96%. According to the survey data, only

8.67% of the respondents thought that this amount was moderate, while 53.33% of the surveyed households answered that this amount is low and 38% of respondents stated that it was too little and not commensurate with the effort they spent to protect forests. So it is not a motivation to encourage households to protect forests.

Table 4. Contribution of PFES money in income of forest owners who are households

Criteria	Units	Hoa Binh city	Da Bac district
1. PFES amount received by the household/year	VND	426,955	520,761
2. Average income from forest of the household/ year	Million VND	8.4	8.14
3. Average total income of the household/year	Million VND	70	54.42
4. The contribution rate of PFES money to the total income from forest of the household	%	5.08	6.40
5. The contribution rate of PFES money to the total income of the household	%	0.61	0.96

Source: Surveyed data, 2019

FES amount spent to forest owners in Hoa Binh province is shown in Table 5. The total amount of FES money spent to forest owners tends to increase over the years, but increases the most in 2017 and 2018. It is because of the Government's regulations to increase the payable amount of one kWh of electricity and m³ of water and the increase in the forest area of

the Hydropower plants and clean water plants. In the period from 2011 to 2018, the total amount spent to forest owners was 94,290.82 million VND. This is a large amount, but the amount received by each forest owner being a household or individual is still modest because Hoa Binh has a big number of forest owners but small forest area of household providing FES.

Table 5. The amount of FES paid to forest owners over the years

Unit: Million VND

Forest owners	2011- 2012	2013	2014	2015	2016	2017	2018
1. Organizations	1,350.08	1,250.35	1,488.21	1,543.58	1,955.51	3,168.40	4,530.56
2. Households, individuals, communities and CPCs	8,054.55	7,459.61	9,026.02	9,514.82	10,503.86	14,836.05	18,909.22
Total	9,404.63	8,709.96	10,514.23	11,058.40	12,459.37	18,004.45	23,439.78

Source: Hoa Binh FPDF (2019)

3.2 Factors affecting the implementation of the PFES policy in Hoa Binh province

The process of implementing the PFES policy in Hoa Binh province is influenced by six main factors, including:

3.2.1. Contents of the policy on PFES

The policy content, including 4 criteria, and the policy implementation officers' opinions are shown in Table 6. In terms of opinions of policy

enforcement staff about policy content, their answers from “normal” to “appropriate” reach over 50%. The criterion of timeliness has the highest percentage of respondents choosing the answer of “not suitable” (44.44%) due to unprecedented PFES policy and the first financial mechanism in the forestry sector without using the State budget. So there is not much experience in the policy enforcement.

Table 6. Evaluation of policy enforcement officers about content of the policy on PFES

Criteria	Assessment (%)		
	Appropriate	Normal	Inappropriate
1. Implementation process	33.34	44.44	22.22
2. Overlapping content	66.67	33.33	0
3. Timeliness	11.12	44.44	44.44
4. Synchronism	55.56	33.33	11.11

Source: Data collected from interviewing policy enforcing staff (2019)

3.2.2. Policy enforcement apparatus

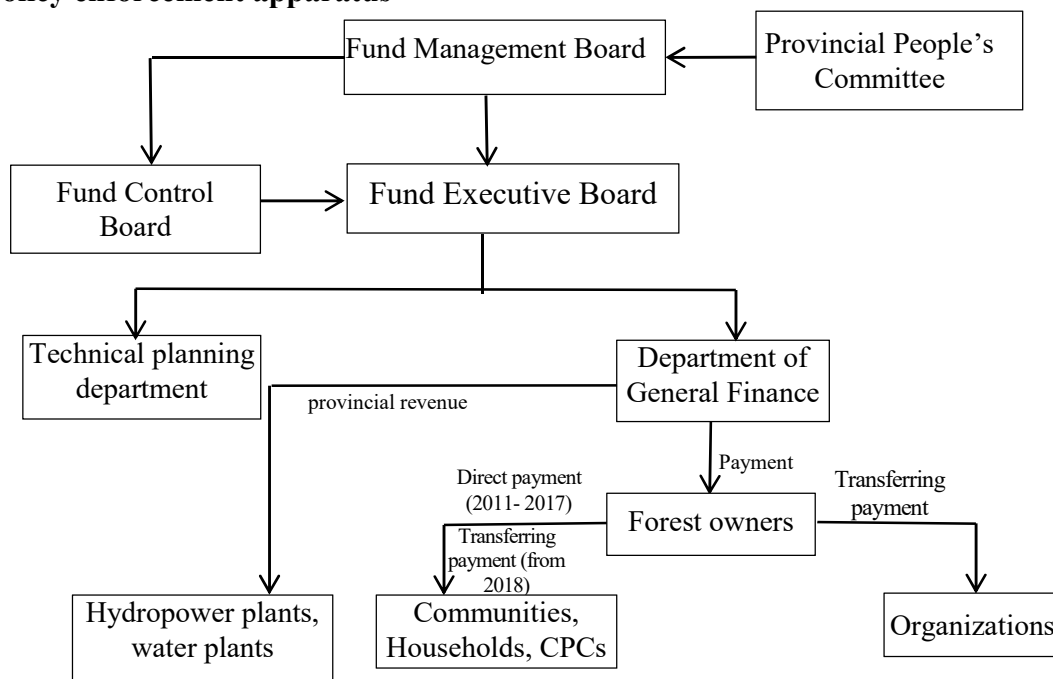


Figure 2. Apparatus of Hoa Binh FPDF

The mechanism that directly organizes the PFES implementation in Hoa Binh is the Provincial Forest Protection and Development Fund. At the time of establishment (December 2011), the Hoa Binh FPDF worked concurrently. By 2017, the Fund's apparatus was strengthened and the Fund's Board of

Management went into full-time operation. Therefore, PFES activities are directed and implemented more effectively. Because the system of Forest Fund at district and commune levels has not been established, the Hoa Binh FPDF directly supply guidance to communes and villages in the FES provision areas.

Table 7. Evaluation of policy enforcement staff on the level of consolidation of the PFES implementation organization system

Criteria	Evaluation (%)		
	Not good	Average	Good
1. Timely level	33.33	55.56	11.11
2. The degree of accountability among the members	22.22	55.56	22.22
3. Level of coordination assurance	22.23	44.44	33.33

Source: Data collected from interviewing policy enforcing staff (2019)

Opinions of policy implementation staff on the level of consolidation of PFES implementation organization system in Hoa Binh province are shown in table above. Most of the opinions are “Average” and “Good”,

which shows that the Provincial FF has made great efforts in strengthening the apparatus for policy enforcement.

3.2.3. Capacity of policy enforcement staff

Table 8. Evaluation of FES providers and users of policy implementation staff's working capacity

Evaluators	Good		Average		Not good	
	Number of respondents	%	Number of respondents	%	Number of respondents	%
1. FES providers	59	39.33	85	56.67	6	4.0
2. FES users	1	50	1	50	0	0

Source: Compiled from survey questionnaires & in-depth interviews (2019)

The working capacity of policy enforcement staff meets the requirements. In order to improve the effectiveness of policy enforcement, it is necessary to have staff in charge of stages such as communication, technology, information technology application in the measurement, determination and updating of forest areas that provide FES.

3.2.4 Resources for policy implementation

The main agency responsible for implementing PFES is Hoa Binh Forest Fund in conjunction with Provincial Forest Protection Department, Song Da Protection Forest Management Board and other relevant agencies. The financial source for policy implementation is the income from service users. This is the main financial source to implement PFES

(including payments to forest owners providing FES and maintaining the apparatus of the Provincial ForestFund).

In addition, the process of implementing the policy in the province has not received financial support from any organization or individual. Therefore, the financial resources for implementing the policy are currently very limited.

According to survey results of assessment of policy implementation officers on the mobilization of resources in implementing PFES in Hoa Binh province, opinions are concentrated in the weak and medium level. This proves that it is necessary to have more mobilization mechanisms to increase financial resources for policy implementation.

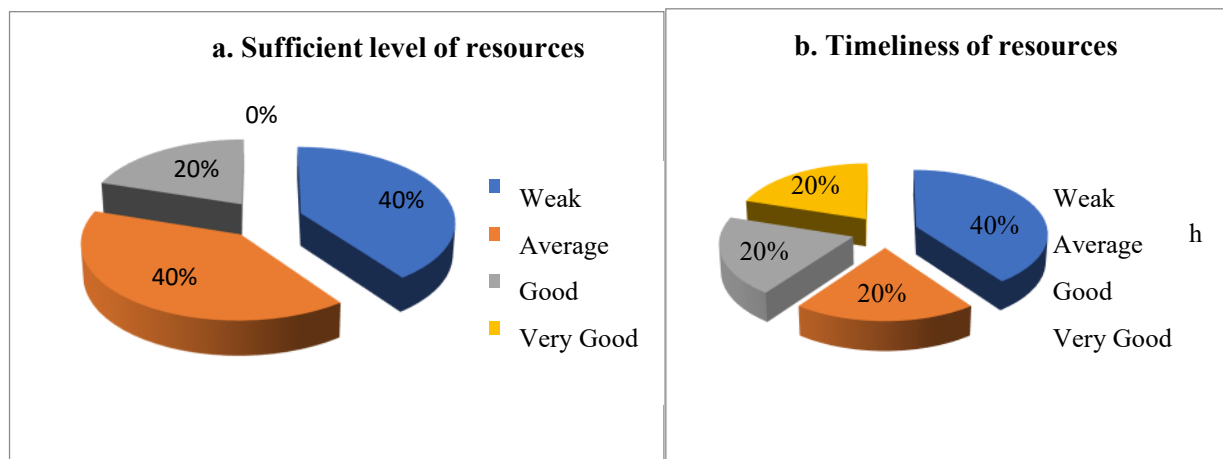


Figure 3. Evaluation of policy enforcement officers on resource mobilization

3.2.5. Ways to propagate the policy

The method of policy propaganda and dissemination is an important factor affecting the results as well as effectiveness of policy enforcement. In addition, it also affects the

beneficiaries' perception of the policy. At the same time, the perception of the beneficiaries is also seen as a criterion to measure the effectiveness of the propaganda.

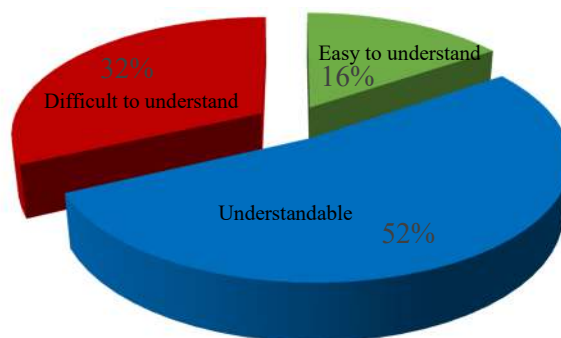


Figure 4. Household assessment on ways to disseminate and propagate the policy

According to the results of synthesizing the survey data, 32% of the respondents, who are households and individuals, think that the policy propaganda is still difficult to understand. Funding for policy propaganda is very tight, so the frequency of propaganda is not guaranteed. In fact, policy propaganda is still formalistic, the participants of the training courses are not appropriate. Most of them are village and commune officials while only limited number of households take part in. Village and commune officials go to training and then pass them on to households. In fact, the qualifications of village and commune officials are still limited, so knowledge transferring is sometimes incompleting. Therefore, it is the local people's desire to open more training courses where the participants are the

households and the training place is right in the commune or village, creating favorable conditions for relocation.

3.2.6. Characteristics of policy beneficiaries

Beneficiaries of PFES policy in Hoa Binh are forest owners, of which forest owners, who are households, individuals, are assigned to manage and protect 39.55% of forest areas and entitled to FES money. The results of the binary logistic model analyzing the factors of the household characteristics affecting policy enforcement show that: the number of forestry workers, the number of years of experience, the area of the forest to be paid for FES, execution location, qualifications and ethnicity have an influence on policy implementation. In which location and ethnicity are the most influential factors to the policy implementation in Hoa Binh province

for forest owners who are households. Assuming that the initial probability of a good policy enforcement is 25%, the location changes from Da Bac district to Hoa Binh city, that probability will be good will increase to

38.9% (increase by 13.9%). When an ethnic minority household changes to a Kinh household, the probability that policy implementation will be good is 39.3% (increase by 14.3%).

Table 9. Analysis results of factors affecting the implementation of PFES policy

Affecting factors	Regression coefficients (β)	Standard deviation (Std)	P-value	Exp (β)
Coefficient	-9.854*	1.068	0	-
Labour (X ₁)	0.170***	0.691	0.075	1.185
Experience (X ₂)	0.005*	1.041	0.007	1.005
Investment (X ₃)	-0.068	0.088	0.444	0.935
Forest area (X ₄)	0.181***	0.599	0.066	1.198
Location (X ₅)	0.649*	0.639	0	1.914
Gender (X ₆)	0.159	0.869	0.855	1.172
Qualification (X _{7_1})	-0.416**	0.640	0.015	0.660
Qualification (X _{7_2})	-0.361**	0.574	0.034	0.697
Ethnicity (X ₈)	0.665***	0.552	0.08	1.944

* Statistically significance at 1%; ** Statistically significance at 5%; *** Statistically significance at 10%

3.3 Solutions to effectively implement the PFES policy in Hoa Binh province

The first solution is to issue documents specifying policies. The Provincial People's Committee promulgates a coordination mechanism among relevant agencies in the province to ensure consistency, strictness and responsibility among them on the basis of their functions and duties. Especially the close coordination between the Forest Protection Department, Natural Resources and Environment and the Provincial Forest Protection and Hoa Binh FPDF in updating land allocation boundaries, which contributes to more effective PFES implementation. Promulgating regulations on the management and use of PFES money with the Commune People's Committee in order to help the financial monitoring of the CPCs as a forest owner to be more effective.

Secondly, policy dissemination and propaganda should be strengthened. There are several suggestions to implement this solutions: Continuing propaganda among the people and forest owners to strictly implement the Law on Forestry and Decree No.156/2018/ND-CP; The use of radio, television, theatricalization, calendar printing, in conjunction with training

institutions ... should be optimized to disseminate and propagate policies; Policy propaganda should also be developed in ethnic languages to help people easily hear and understand, thereby improving the effectiveness of policy propaganda; Collaborate more effectively with local forest rangers in districts and communes on which forest areas are paid for FES to carry out policy propaganda. It is necessary to open more training courses on policies for households and individuals with contents such as: determination of the forest area to be paid, conditions, procedures and payment process. Besides, it is essential to increase interactivity in policy propaganda activities: Propaganda content can be expressed in the form of question and answer by multiple choice questions. People who answer the question correctly will receive a gift.

Third, revenue sources need to be expanded with FES users of ecotourism and aquaculture. Hoa Binh province has 11 active ecotourism business establishments and 10 under construction (Department of Culture, Sports and Tourism, 2017). Ecotourism will thrive in the future, especially in Song Da lake area because it has been planned as a National Tourist Area. In the province, there are 45 concentrated fish

cage farms, of which 25 farms are on Hoa Binh lake, the remaining 20 farms are in other rivers (Fisheries Department, 2017). Therefore, it is necessary to study and propose specific regulations on determining the area to provide FES for ecotourism and aquaculture to have a legal basis to convince and bind the users who must make payment for using FES.

Fourth, qualifications for the staff of the Provincial Forest Fund should be improved, especially in the field of applying information technology to forest quality inspection and assessment. The Provincial FF should fund the staff in order to promote them to increase their qualifications. The staff need also to be encouraged and motivated by giving them full salary when they taking part in both short and long term classes.

Finally, we suggest several solutions for forest protection and development as they can make an important contribution to the effective implementation of the PFES policy in Hoa Binh province. Regarding forest protection, the solutions are to apply effective measures to proactively detect, prevent, and handle violations of forest management and protection, exploitation and processing of forest products, reduce the number of violations, maintain the forest stand situation, and prevent hot spots from occurring; Carry out the review, development of plans; organize forest fire preventing and fighting measures; take fire prevention as the focus under the 04-spot motto, including: On-site forces, on-site commanders, on-site vehicles, and on-site logistic; Enhance role, responsibility and professional capacity of the forest protection force; promote propaganda, advocacy; and encourage community forces inside and along the forest to actively participate in forest protection and fire prevention and fighting (mobilize households living in and near forests to sign commitments to protect forests). Regarding forest development, for natural forests, some recommendations are to focus on protecting existing natural forests; Rationally exploit non-timber forest products; create favor conditions for local communities to participate in forest protection; and Improve the quality and reserves

of natural forests by using measures of nurturing forests, zoning off for regeneration, enrichment and improvement of poor forests. *For plantation forests*, on the basis of the planning results of 3 forest types, organize the assessment of the existing bare land and production forest land to take appropriate measures to improve productivity, quality and economic efficiency of the forest; organize the implementation of the policy of big timber forest business; Step by step organize production association according to forestry value chains; Link afforestation, exploitation, processing and sale of plantation forest products according to the value chain.

4. CONCLUSION

Hoa Binh province started implementing PFES from 2013. By the end of 2018, the amount of FES money paid to forest owners to protect 47.55% of the province's forest area was more than 92 billion VND. In addition, the results of policy implementation are analyzed under the aspects: Services and the boundaries of FES provision; Determine who must pay and be paid for FES; Results of propaganda, inspection and supervision activities; Results of forest areas receiving FES money; and Results of collection and payment of FES money.

In the policy implementation process, there are a number of factors, such as: the content of the PFES policy, the implementation organization, the capacity of the policy implementation staff, the resources to implement, the propaganda method and the characteristics of the beneficiaries. These factors all affect the results as well as the effectiveness of the policy enforcement process in the locality. By using the binary logistic model, the effect of characteristics of the household to the x work is analyzed and shows that among the factors included in the model, the number of forestry workers, the number of years of experience in forestry production, forest area to be paid for FES, execution location, level of household head and household's ethnic composition have a significant impact on in households. Among these factors, the enforcement place and ethnic composition of the household head have the

most influence on the PFES policy enforcement in Hoa Binh province for the forest owner who is the household.

Based on the results achieved, the research has proposed a number of solutions: Issuing documents to concretize the policy; Policy dissemination and propaganda; Expanding revenue sources with FES users for ecotourism and aquaculture; Improving qualifications of staff of Provincial FF; Strengthening community participation in monitoring of PFES to improve effectiveness of policy implementation in Hoa Binh province in the coming time.

REFERENCES

1. MARD (2017). Preliminary report on 8 years of the Forest Fund (2008 - 2016) and 5 years of implementation of the policy on payment for forest environmental services (2011 - 2016)
2. MARD (2018). Report on 8 years of organizing activities of the Forest Fund (2008 - 2018).
3. Hoa Binh Statistical Office. Hoa Binh Statistical Yearbook 2015, 2016, 2017, 2018. Statistical Publishing House.
4. Government (2010). Decree No. 99/2010/ND-CP dated September 24, 2010 on the policy of PFES

5. Government (2016). Decree 147/2016/ND-CP dated November 2, 2016 on Amending and supplementing a number of articles of the Government's Decree No. 99/2010/ND-CP dated September 24, 2010 on PFES.

6. Government (2018). Decree 156/2018/ND-CP dated November 16, 2018 on detailing the implementation of a number of articles of the Law on Forestry

7. Pham Thu Thuy, Karen Bennett, Vu Tan Phuong, Jake Brunner, Le Ngoc Dung & Nguyen Dinh Tien (2013). Payments for forest environmental services in Vietnam: From policy to practice. Thematic Report 98, International Forest Research Organization.

8. National Assembly (2017). Law on Forestry.

9. Hoa Binh Provincial Forest Fund (2017). Report on the implementation of the policy on PFES in 2017 and the work plan for 2018 - No.71/BC - QBPTR.

10. Hoa Binh Provincial Forest Fund (2016). Preliminary report for 5 years of activities of the Forest Fund and implementation of the policy on payment for forest environmental services in Hoa Binh province.

11. Hoa Binh Provincial Forest Fund (2018). Report on the work results of the Forest Fund for the period 2011 - 2017 and work plan for 2018.

12. Nguyen Thi Y Ly (2013). Evaluating the Pilot Implementation of Payment for Forest Environmental Services in Lam Dong, Vietnam.

CÁC YẾU TỐ ẢNH HƯỞNG ĐẾN THỰC THI CHÍNH SÁCH CHI TRẢ DỊCH VỤ MÔI TRƯỜNG RỪNG TẠI TỈNH HÒA BÌNH

Mai Quyên¹, Nguyễn Phương Lê², Nguyễn Thị Hải Ninh², Vũ Thị Minh Ngọc¹

¹Trường Đại học Lâm nghiệp

²Học viện Nông nghiệp Việt Nam

TÓM TẮT

Nội dung bài báo bao gồm kết quả thực thi chính sách chi trả DVMTR và các yếu tố ảnh hưởng đến thực thi chính sách tại Hòa Bình. Kết quả thực thi được phân tích dưới các khía cạnh: các dịch vụ và ranh giới cung ứng DVMTR; đối tượng phải trả và được chi trả DVMTR; Kết quả hoạt động tuyên truyền, kiểm tra giám sát, kết quả diện tích rừng được nhận tiền DVMTR, kết quả thu, chi tiền DVMTR. Phân tích sự ảnh hưởng của 6 yếu tố đến quá trình thực thi chính sách bao gồm: nội dung chính sách chi trả DVMTR, bộ máy tổ chức, năng lực của cán bộ thực thi chính sách, các nguồn lực, cách thức tuyên truyền và đặc điểm của đối tượng thụ hưởng. Hơn nữa, bằng việc sử dụng mô hình binary logistic phân tích các yếu tố thuộc đặc điểm của hộ ảnh hưởng đến công tác thực thi cho thấy rằng: số lượng lao động lâm nghiệp, số năm kinh nghiệm tham gia sản xuất lâm nghiệp, diện tích rừng được nhận chi trả DVMTR, địa điểm thực thi, trình độ của chủ hộ và thành phần dân tộc của hộ có ảnh hưởng rõ rệt đến thực thi chính sách tại các hộ. Dựa trên những kết quả đạt được nghiên cứu đã đề xuất một số giải pháp nhằm nâng cao hiệu quả thực thi chính sách trên địa bàn tỉnh bao gồm: Ban hành văn bản cụ thể hóa chính sách; phổ biến, tuyên truyền chính sách; Mở rộng nguồn thu với các đối tượng sử dụng DVMTR cho du lịch sinh thái và nuôi trồng thủy sản; Nâng cao trình độ cho cán bộ Quỹ Bảo vệ & Phát triển rừng; Bảo vệ và phát triển rừng.

Từ khóa: chi trả dịch vụ môi trường rừng, dịch vụ môi trường rừng, thực thi chính sách, yếu tố ảnh hưởng.

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