



# PERFORMANCE OF RIGHTS OVER NATURAL FOREST AND ITS IMPACT ON LOCAL PEOPLE' LIVELIHOOD IN VIETNAM'S UPLAND: A CASE STUDY IN KA NON 1 VILLAGE, HUONG LAM COMMUNE, A LUOI DISTRICT, THUA THIEN HUE PROVINCE

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**Abstract:** For the upland people, especially ethnic minorities, forests play a very important role in daily life. However, the implementation of the rights over the forest can be formal (legal rights) and informal (right in the practice), and it always affects the livelihoods of upland people. In this context, the conceptual framework of this study considers the implementation of activities based on forests because the implementation of "bundles of rights" over forests and people's livelihood activities consist of natural-based and non-natural-based resources. This study was conducted in Ka Non 1, a poor and remote area village in Huong Lam commune, A Luoi district, Thua Thien Hue province, where the Kinh and ethnic minorities (Co Tu and Ta Oi) live together. The authors revealed that the life of villagers still depends much on forests; local people still carry out activities relating to natural forests (perform informal rights over forests) such as shifting cultivation, logging, gathering non-timber forest products (NTFPs) and hunting wildlife even though they do not have any legal rights (formal rights) over those forest areas; poor households carry out shifting cultivation to mainly meet the needs for food in daily life, while non-poor households tend to carry out shifting cultivation in the first year, and then switch to planting forests; other forest-based activities were carried out with both sale and use purposes.

**Keywords:** A Luoi, bundles of rights, ethnic minority, livelihood, natural forest

## 1 Introduction

Vietnam has a dense population and depends largely on natural resources. One of the important natural resources is the forest and forestland. The mountainous and upland areas of Vietnam consist of three-fourths of the total territory, and they are also the home of most ethnic minority groups and considered as a potential area for the regional and national development in terms of natural resources.

In Vietnam's upland areas, where much of the forest is located, people are classified as poor. For these people, the forest and forestland play a vital role in their life. In which, forests often contribute a significant portion of the household income. Forest loss and degradation increase the risk of the reduction of livelihoods due to natural disasters. Large-scale clearing of

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forests for commercial logging has displaced and marginalised local people across the region. Reduced access to forests has also been a major factor forcing them into unsustainable farming practice. Generally, the upland areas are widely recognised as undeveloped, particularly where ethnic minority groups live. In the recent decades, the upland areas have been in a state of deepening the environmental and social crisis. Unless current trends are reversed, there is a real danger of widespread environmental disaster and massive human tragedy (Jamieson et al., 1998).

A Luoi, the largest mountainous district, is located in the west of Thua Thien Hue province in Central Vietnam. Up to 2006, the forest and forestland area in the district was 97,313.6 hectares, in which the protection forest was 59,461.5 hectares, accounting 61.01 %. Until 2016, the total area of the three types of forests was planned to be 101,875.0 hectares, of which the protection forest was 42,363 hectares, occupying 41.58 %.

Theoretically, the security of forest tenure is essential for motivating people to protect and maintain the land and forest. This is an incentive for people to invest in land and forest management and reduce the incentive for resource over-exploitation for their livelihood. In the recent decades, the government, therefore, have launched a series of land and forest policies aiming to alleviate poverty. However, the recognised fact is that local people in A Luoi district, forestland- and forest-dependent people, are still poor. The reason is that more than 70 % forest area belongs to A Luoi Protection Forest Management Board (PFMB).

Huong Lam is a frontier poor commune with a total area of 5,072 hectares and a population of 2,013 people with 486 households (Huong Lam CPC, 2016). The natural forest area occupies about 75 % of the total area managed by A Luoi PFMB. Although natural forests belong to the state (A Luoi PFMB), in everyday practice, local people still carry out forest-based activities for their livelihoods. In this context, how those activities impact the local people's livelihood is a key question that this study tries to answer.

This study aims to: (i) examine the formal rights (legal rights) and informal rights (rights in practice) over natural forests; (ii) analyse the influence of the forest rights implementation on the household groups' livelihood; and (iii) propose some solutions for improving livelihood that links with forest conservation.

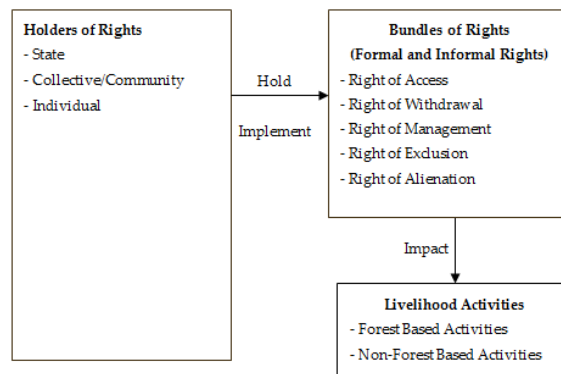
## **2 Research methods**

### **2.1 Theoretical approach and conceptual framework**

This study applied the "bundles of rights" approach developed by Schlager and Ostrom (1992) to analyse the performance of rights over forests. It was also based on the sustainable livelihood framework created by Chambers and Conway (1992), Diana (1998), and DFID (2001) to assess the

capital/asset livelihood. The livelihood activities of the local people in the research site were analysed by using the theory suggested by Ellis (1998).

The conceptual framework of this study (Figure 1) considered local people as the entry point within the research site who carried out the forest-based activities. They performed “bundles of rights” over forests: right of access, right of withdrawal, right of management, right of exclusion, and right of alienation. These are formal and informal rights. In this manner, formal rights are enforced by the state (central government) with a lawful recognition by formal and legal instrumentality. With formal rights, the right-holder can presume in an administrative or judicial setting (law, court, etc.) if their rights are challenged. Informal rights refer to an empirical practice in cases that are not recognised by the state as legitimate in which rights are defined and enforced by resource users themselves (Schlager and Ostrom 1992).



**Figure 1.** The conceptual framework for the study

## 2.2 Data collection

In order to obtain relevant data for the study, we have employed several techniques such as secondary data review, focus group discussion, household survey, and in-depth interview.

### Review of secondary data

The secondary data include general socio-economic conditions and other aspects relevant to the study site. Secondary data were mainly collected from Huong Lam Commune People Committee (CPC) reports.

### Focus group discussion

The focus group discussions via unstructured interviews were conducted to obtain preliminary issues to identify relevant factors and questions in designing our survey household questionnaire. The selected key informants for conducting the focus group discussions were divided into various groups: poor household group, non-poor household group, village leaders group (including head of village, head of the Woman Union, Farmer Association, Youth Union,

and village elders), and officer group (including staffs of A Luoi PFMB, Forest Protection Unit and CPC).

### **Household survey**

The household surveys were conducted using a survey questionnaire. The questionnaire consists of three main sections: (1) profile of household; (2) livelihood activities of household; (3) activities relating to natural forests.

We randomly surveyed 52 households consisting of 40 non-poor households (approximate 41.2 % of the total non-poor households in the village) and 12 poor households (approximate 80.0 % of the total poor households in the village).

### **In-depth interview**

The in-depth interviews were conducted with 10 people to examine the impact of performance of “bundles of rights” over forests on their livelihood. Interviewees consisted of representatives of households: shifting cultivation (2 people), gathering NTFPs (2 people), trapping wildlife (2 people), and cutting timber (4 people, in which there were 2 timber owners, 1 sawyer, and 1 pulling buffalo owner). These interviewees were selected by the village leader group. The collected data were used as a case study to strengthen convincingness for findings.

## **2.3 Data analysis**

The gathered data were analysed and interpreted qualitatively and quantitatively to present the findings. The statistical analysis was carried out by using the SPSS version 16.0 software.

Given the conceptual framework and collected data, we first examined how local people performed rights over forests, including formal and informal rights, then analysed local people’s livelihood activities, which consist of forest-based activities (shifting cultivation, logging, etc.) and non-forest based activities (wage labor, service, etc.), and finally analysed the impacts of the performance of rights over forests on local people’s livelihood activities.

## **3 Basic information of Ka Non 1 village research site**

Ka Non 1 village was separated from village Ka Non in 1995. The population of the village is mostly ethnic minorities and their livelihood much depends on the forest.

There are 112 households in the village composed of 65 Co Tu households (58.0 %), 7 Ta Oi households (6.3 %), and 40 Kinh households (35.7 %). The village has 15 poor households (13.4 %), and they are all ethnic minority.

So far, the natural area of the village has not been studied in detail, but there is an annual statistics of the agricultural land. According to the CPC Huong Lam (2016), by the end of 2016, the village has 47.62 ha of wet rice, 1.2 ha of hill rice (swidden land), 1.2 ha of cassava, 0.75 ha of maize, 127.7ha of plantation, and 7.2 ha of other crops (vegetables, beans, etc.).

The area of 115.3 ha of natural forest located in the village belongs to A Luoi PFMB, while the villagers' life (especially ethnic minorities) meets with many difficulties. Most of them do not have sufficient food (rice) for more than three months. Hence, the pressure on natural forests from the village is huge. This is the main reason for choosing Ka Non 1 as a research site.

In general, Ka Non 1 villagers are very poor: even non-poor households consisting of only 30 % of the total households have sufficient food all year round, and about 20 % of the households do not have enough food for more than seven months per year (Table 1)

**Table 1.** Situation of food security in Ka Non 1 village

Household group	Sufficient food (%)	Insufficient food (%)	Insufficient food (%)		
			3 months	4–6 months	more than 7 months
Non-poor household	30,0	70,0	35,0	15,0	20,0
Poor household	16,7	83,3	25,0	41,7	16,6

Source: Household survey, 2016

## 4 Results and discussion

### 4.1 Performance of rights over natural forests

Presently, because all natural forests in Ka Non 1 are managed by A Luoi PFMB, villagers have only formal rights over those forests. They only have the access right to go into or to walk in the forest for relaxation. However, villagers consider those forests as a common pool resource. They, therefore, daily exercise rights of withdrawal, management, exclusion, and alienation over forests (Table 2).

All forest-based activities of villagers presented below are the performance of informal rights over forests.

#### Right of withdrawal

The right of withdrawal in the context of forest management is seen as the right to obtain the products of the forest such as timber, NTFPs, and hunting.

##### *Logging*

Villagers mainly cut timber for building houses, making cabinets, furniture, coffins and stables, etc. They also cut timber for sale to get money for household expenses. All villagers

think that they do not need to ask for permission of local authorities for doing these activities. In fact, most of the local people cut timbers without permission for sale.

#### *Collecting NTFPs and trapping wildlife*

According to the villagers, they collect NTFPs by proprietary notations during the discovery process. Non-timber forest product sites are claimed as the property of the people who found them. If somebody detects NTFPs, they then have right to gather the products. For instance, if somebody detects a beehive on a tree, they just thrust at that tree and stick a branch of tree towards that beehive. In that case, although they have not exploited it yet, others would recognize that the beehive has its owner and would not exploit it.

In fact, in Ka Non 1, local people, particularly ethnic minorities, are still trapping wildlife although this activity is strictly prohibited by the government. The trapped wildlife is mainly sold for household daily expenditure. They also fish in the streams in the forest for daily meals or for sale.

#### **Right of management**

The right of management is seen as the right to regulate the internal use patterns and to transform the forest resources by making improvements such as using the uncovered forestland for agricultural production, planting new trees, thinning trees, and enriching forests.

In the case of Ka Non 1, shifting cultivation is a sole activity that concerns right of management. In the past, when the slash-and-burn practice was the principal farming technique, the unplanted land was allowed to stay uncultivated. After seven to ten years people came back and cut it down once again, burned the site and planted for a season, went through a cycle of crop rotation for the second time, and then the third. In recent years, as a result of the population growth on one hand, and the government prohibitions of slash-and-burn practice on other hand, villagers have to shorten the fallow period of each patch of swidden land (only 1–2 years/period) and tend to transfer such land to afforestation. However, ethnic minority's households still plant hill rice in the swidden land in the natural forest for their daily meal.

#### **Right of exclusion**

This study considers the right of exclusion as one to determine who will have an access right and withdrawal right such as the right to stop violators who cut timber or do other activities without permission and the right to determine who can cut timber and collect NTFPs, and implement other activities relating to that forest.

The case of Ka Non 1 shows that the right of exclusion is only applicable to shifting cultivation, similar to collecting NTFPs. The possession of the swidden land complies with the "was first-come first" way. This means that if someone uses a patch of forest for shifting

cultivation, others will never be allowed to do any activities on such a land although its owner (who used it earlier) does not cultivate on the land or leave it in the period of fallow. However, local people here still agree that if allowed by the previous owner, others can still cultivate on that fallow patch.

### Right of alienation

Although the swidden land has not been legally recognised, most families transfer this land to children who separate households or let them inherit that land when the parents die. However, the swidden land is inherited only to sons because the parents think that the land for their daughter is her husband's responsibility.

**Table 2.** Informal rights over forests in Ka Non 1 village

Bundles of rights	Actions	Social actors	
		Ka Non 1 villagers	Outsiders
Withdrawal	– Cut timber in forests without permission	x	x
	– Collecting NTFPs and trapping wildlife in forests	x	x
Management	– Shifting cultivation	x	
Exclusion	– Excluding somebody from swidden land	x	
Alienation	– Inheriting swidden land to son(s)	x	

Source: From the focus group discussion, 2016

### 4.2 Livelihood activities of local people in Ka Non 1 village

Generally, the livelihoods of local people in the village are diverse (Table 3). However, the practices like wet rice cultivation, shifting cultivation, animal husbandry, gathering NTFPs, and cutting timber are their main livelihood activities. Although the households in the village who cultivate wet rice comprise 94.23 % of the total (52), the household's average area of wet rice is small and the productivity is very low; therefore, the rice production is insufficient all year round. They, hence, conduct activities related to the district PFMB's forests to supplement the money to cover their daily expenses.

**Table 3.** Summary of livelihood activities of household groups in Ka Non 1 village

Livelihood activities	Number of households	Rate (%)
Paddy field	49	94.23
Shifting cultivation	44	84.62
Home garden	35	67.31

Livelihood activities	Number of households	Rate (%)
Animal husbandry	44	84.62
Raising and catching fish	36	69.23
Afforestation	41	78.85
Logging	36	69.23
Gathering NTFPs	43	82.69
Trapping wildlife	32	61.54
Small business	31	59.62
Hired labour	37	71.15
Others	37	71.15

Source: Household survey, 2016

### 4.3 Influences of natural forest-based activities on local people's livelihoods

Forest-based livelihoods of local people are manifested through four main activities: shifting cultivation, cutting timber, gathering NTFPs, and trapping wildlife. Although all these activities have not been legally recognised, villagers practise them daily. The rate of forest-based activities of two household groups is presented in Table 4.

**Table 4.** Rate of forest-based activities of each household group

Forest based-activities	Poor household		Non-poor household	
	No of hhs	Rate (%)*	No of hhs	Rate (%)*
Shifting cultivation	10	83.33	34	85.00
Logging	9	75.00	27	67.50
Gathering NTFPs	11	91.67	32	80.00
Trapping wildlife	7	58.33	25	62.50

Note: \*: % in comparison with 12 interviewed poor households/40 interviewed non-poor households

Source: Household survey, 2016

### Shifting cultivation and livelihoods

Currently, most poor households and non-poor households conduct shifting cultivation on the forest areas managed by the A Luoi PFMB and Huong Lam CPC. These households use the swidden land for planting hill rice, cassava, beans and vegetables (sweet potato, squash and calabash) to provide food and vegetables for their daily meals. However, because the hill rice productivity is very low and the wet rice production area is limited, there is usually insufficient rice for the poor households to consume over six months per year. With this circumstance, planting cassava on the swidden land plays an important role in the food supply in the



between-crop months. Especially, young families just separated from their parents after marriage depend on the swidden land for ensuring food security. This is also one of the main reasons the parents often inherit the swidden land to their sons.

The swidden land is used differently between poor and non-poor households. The poor households tend to use such a land to plant hill rice, crops, and vegetables to ensure food security. Meanwhile, most non-poor households want to allocate the swidden land to afforestation (planting acacias). Currently, non-poor households often cut forests to carry out shifting cultivation in the first year; they, then, plant trees with the expectation that the state will regularize (issue the Red Book) this forest once it has been planted with acacia (Table 5) because they realize that the state is currently encouraging afforestation.

The surveyed households' demand on the swidden land use has focused on three main trends: (1) planting hill rice, cassava, and crops; (2) planting trees (acacia); and (3) planting hill rice in the first year and acacia or rubber later.

**Table 5.** Shifting cultivation trend in future

	Reclaimed demand	Hill rice cultivation	Afforestation	Cultivating hill rice, then planting forest
Number of households	26	4	7	15
Rate (%)	50.0	7.7	13.5	28.8

Source: Household survey, 2016

### Logging and livelihoods

Before the "Program on eradication of thatched cottage houses" (Eradication of provisional houses) that was conducted by State in the district (2004), villagers cut timber to mainly make coffins, furniture, etc. When State started conducting this program and building the Ho Chi Minh highway, sawmills were simultaneously set up in the village, and an illegal logging "movement" arose.

In the past, if the villagers had timber, they did not know to whom to sell, and they just cut timber for use. At present, they just pull timber from the forest to the village for sale no matter it is big or small. Almost all the youth in the village often cut timber for selling to get money for activities that meet their daily demands, such as drinking, singing karaoke. However, most of the poor households cut timber for selling to get money to purchase rice in the between-crop months or other expenses such as purchasing books for their children when schools start again or buy medicines when they are ill, or spend on the funeral and wedding occasions.

Wood is often sold in two main ways: the round wood is sold to sawmills in the village, the sawn timber is sold to households in the village that have the demand for building or repairing houses or sold to people outside the village (most of them are lowland people).

In fact, non-poor households get much higher benefit from logging than poor households. If the poor households want to cut timber, they must, then, ask the non-poor households who have pulling buffalos to go with them into the forest for logging. The benefit sharing mechanism of logging is very clear and becomes an unwritten law in the village. The timber is usually divided into three parts: one part for the buffalo owner, one part for the buffalo, and one part for the poor household. However, the buffalo owners do not rent everyone to cut timber, because the number of the buffalo owners in the village is small, while the households that want to cut timber are numerous. Therefore, the buffalo owners often call their kinsmen, friends or those with strong health to go into the forest for logging.

Additionally, other poor households go into the forest to search for timber, hire sawyers to go into the forest for sawing. After the timber is entirely sawn, they hire the pulling buffalo owner to pull sawn timber from the forest to sell. The money from the timber sale is shared equally among three parties (the timber owner, the sawyers, and the pulling buffalo owner). The parties pay money for food themselves. The timber owner is responsible for going to the forest to look for timber, to make the way for the buffalo to pull the timber and to direct how to saw the timber. The timber owner usually earns less money from the job (after deducting all expenses) than the sawyer and the buffalo owner because he must bear the cost for unloading the timber to his house and other transaction costs. In addition, there are also cases of hiring sawyers to saw timber in the forest with 500,000 VND per cubic meter, and pulling the timber with 140,000 VND per day.

### **Gathering NTFPs and livelihoods**

Local people often get into the forest to collect rattan, conical hat leaves, bamboo shoots, mushrooms, honey, vegetables, and medicinal plants. The rattan, conical hat leaves, and honey are mainly sold in the shops in the village. The bamboo shoots, mushrooms are used for eating and raising livestock.

Legally, villagers are not allowed to collect NTFPs in the A Luoi PFMB's forest area, except those signing the contract for collecting NTFPs with A Luoi PFMB or Forest Protection Unit (FPU) or those sub-contracting with the early contractees. However, in reality, everyone goes into the forest for collecting NTFPs even though they do not have the permission, and they are often ignored when detected. These two organizations mainly concentrate on the timber management, and they do not pay much attention to the NTFPs management. The non-timber forest products are, therefore, considered as the free-access commodities. This is why the

villagers who go into the forest to collect NTFPs make up a high rate, in which the rate of poor households is higher than that of non-poor households.

### Trapping wildlife and livelihoods

Formerly, villagers often went into the forest for hunting and trapping wildlife mainly for their nutritional needs. If big animals (a deer, wild boar, etc.) were hunted (or trapped), they were shared among all the villagers. But small animals such as squirrels, porcupines, and weasels were shared just among the households within the clan.

Presently, because the market demand for wildlife consumption is increasing, villagers often sell the hunted animals to cover other expenses (purchase rice, seasoning, etc.).

In short, although villagers in Ka Non 1 do not have legal rights over natural forests, in everyday practice, they are still conducting forest-based activities for their livelihoods (Table 6) because of their life difficulties.

**Table 6.** Forest-based activities of local people in Ka Non 1 village

Unit: %

Livelihood activities	In comparison with surveyed households		Non-poor household		Poor household	
	Non-poor household	Poor household	Sale	Use	Sale	Use
Shifting cultivation	37.5	50.0		100		100
Logging	30.0	41.7	72.5	27.5	66.7	33.3
Gathering NTFPs	65.0	50.0	45.0	55.0	41.7	58.3
Trapping wildlife	5.0	8.3	97.5	2.5	83.3	16.7

Source: Household survey, 2016

Most households in the village do not have sufficient rice for their consumption. They, therefore, often go into A Luoi PFMB's forests for logging, trapping wildlife, collecting NTFPs to sell for rice in the between-crop months. The solution to the food shortage is shown in Table 7.

**Table 7.** Source to solve food shortages

Unit: %

	Eating cassava meal (from shifting cultivation)	Logging	Gathering NTFPs	Trapping wildlife	Hired labour
Non-poor household	30.0	10.0	40.0	1.9	35.0
Poor household	41.7	16.7	50.0	1.9	41.7

Source: Household survey, 2016

## **5 Recommendation**

### **5.1 Shifting cultivation area planning**

For ethnic minority households in Ka Non 1, Huong Lam commune, shifting cultivation is an indispensable activity in their life. It does not only connect closely to the culture, manners, and customs but also plays an important role in meeting the daily food demand, particularly in the between-crop months. Therefore, they continue to deforest for shifting cultivation. In order to overcome this situation, local authorities (DPC and CPC) and government agencies at the district level (FPU, Office of Natural Resources and Environment) have to conduct shifting cultivation area planning for villagers to reduce pressure on natural forests, at the same time contribute to ensure food security for local people, especially poor households.

Along with shifting cultivation area planning, it is necessary to support households to build experimental models of shifting cultivation towards intensification with the participatory technology development (PTD) approach.

### **5.2 Collaboration with villagers for protecting natural forests**

Ka Non 1, Huong Lam commune is located along the Ho Chi Minh highway and inside the natural forest of A Luoi PFMB. The villager's life still depends on the forest and the fact shows that the forest area and forest quality are decreased. Therefore, the A Luoi PFMB has to sign contracts with villagers for forest protection, particularly for the forest located along the Ho Chi Minh highway. In this manner, villagers/community will really be involved in protecting forests. At the same time, the authorities should create the opportunities for local people to get benefit from the forest in a legal way, particularly get benefit from payment for the forest environmental service policy.

### **5.3 Supporting local people to involve the policy on forest protection and development with poverty reduction**

At present, Government has promulgated the policy on forest protection and development associated with sustainable poverty reduction and ethnic minorities support in period 2015–2020 (Decree 75/2015/ND-CP). Therefore, A Luoi local authorities have to support ethnic minority households in Ka Non 1 to be involved in such a policy to contribute to improving their livelihoods.

### **5.4 Expanding the area of wet rice cultivation**

The village still has many land areas along the streams that are likely suitable to develop wet rice. Therefore, it is necessary to expand the wet rice land and support villagers in intensive cultivation of wet rice in order to contribute to their daily food demand.

## 6 Conclusion

Ka Non 1 is a poor village belonging to the remote areas. The local people's life still depends very much on forests.

Although living at the edge of forests, the local people do not have any legal rights over the natural forests because all the natural forests located in the village are under the management of A Luoi PFMB. However, in everyday practice, the villagers still carry out forest-based activities such as shifting cultivation, logging, gathering NTFPs, and trapping wildlife.

Villagers/farmers carry out shifting cultivation to meet their food demand for daily living, but some households deforest to do shifting cultivation in the first year and plant trees (acacias) later.

Other forest-based activities such as logging, collecting NTFPs, and trapping wildlife for money to buy rice, food and cover other daily expenses. The poor households are still disadvantageous in benefiting from logging (illegal logging) because they do not have working equipment (saws, pulling buffaloes). They only get benefit from logging by their labor. Therefore, the money that poor household earned from logging is always lower than that of the sawyer and buffalo owner.

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