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How to Benefit the Upland Poor in Central Vietnam from Forest Devolution

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Introduction

Forest protection and poverty reduction are intertwined and challenged issues. Forest devolution through reform of forest ownership policies is one part of poverty reduction strategy of many developing countries (Meinzen-Dick & Knox, 2001).

Vietnam government has also pursued forest devolution programs in the early of 1990s. In which State Forest Enterprises (SFEs) restructure is one aim of forest devolution programs, because SFE has still controlled about 40 percent of forestland in Vietnam while forestland and forest as important sources for local livelihoods of millions of Vietnamese (WB, 2006). With Decree 200/ND-CP, entitled “Decree of the Government on the Arrangement, Reform and Development of State Forestry Enterprises,” issued in December 2004, a large area of land over 757.000 ha will be returned to localities from the state forest management bodies to local authorities (Ngo Nguyen, 2008). This is assumed to generate opportunity for promoting private property rights to forestland then encouraging farmers to invest and use forest land and forest resources in sustainable ways.

However, the contributions and effects of forest devolution to poverty reduction and local livelihood still challenges for Vietnam’s policy makers. As the assessment of the World Bank (WB) on poverty in Vietnam: “upland regions with a high proportion of ethnic minorities evidenced higher rates of chronic poverty” and “agriculture still is considered as important source of income of the upland ethnic people (WB, 2012). According to Sikor and Tan (2007), the migration of the Kinh people to upland creates the competition for agricultural land, forest clearing for cultivation; indigenous people are more marginalized by the economic successfulness of the migrants.

Understanding the nature of the forest dependency of ethnic groups, the relation between forest devolution and livelihood of different groups will give us insights about the role of forest devolution in poverty elimination in remove upland areas.

Material and Methods

Primary data collection included cross-section data from 50 households (HHs) of two ethnic groups with non-poor and poor status (random selection); In-depth interview of stakeholders and secondary data were conducted with key informants and related local office.

Linear regression and logistic regression models are applied to identify factors of HHs characteristics affecting two levels of benefit which forest devolution brings to local people. First level of benefit is utilities driven by resource. The second one is rights to resource through the long-term or short-term use of resource. Chi-square test and Independent Sample T-test are applied to identify whether or not there are differentiations between two ethnic groups.

Research results and discussion

Study area description: The research community is one upland commune in Aluoi district of Thua Thien Hue, Vietnam. Its population is constituted from the Kinh people who migrated from the lowland and the Paco group has originated from Central Truong Son Mountains with *Traditional slash-and-burn Economic*. Around 60% of the poor group in the community is the Paco ethnic minority (CPC, 2012). The total area of the study commune is 2,904 ha. In which, forest land is 2414ha (83%). Local people's livelihood strongly depends on land and forest. In comparing two surveyed groups on descriptive statistics, there are some different characteristics as follows:

Table 1: Descriptive statistics of surveyed HHs

HH characteristics	Kinh (n=24)	Paco (n=26)	t-value
Age of HH head	52.29	43.42	-2.050**
Education of HH head (grade)	6.00	4.88	-1.112
Poor category (0,1)	.27	.79	-4.245***
HH size (No.)	4.21	4.88	1.346
HH's labor (No.)	2.21	2.46	1.560
Rice paddy size (m2)	0.00	796	2.700**
Home garden (ha)	.79	.85	.492
Forestland (ha)	1.3367	.7115	-1.655

Remark: *, **, *** = significant at 10%, 5%, and 1% level, respectively

Agricultural production and forest dependency

The main on-farm livelihood patterns of local people in Phu Vinh commune are rice production (wet rice), garden cultivation (short-term crop and long-term fruit trees), animal raising and non-timber forest product gather for subsistence and cash income.

Table 2 shows significantly difference between the Kinh and the Paco in rice paddy usage, garden investment, animal raising and NTFPs. While rice paddy cultivation is traditional practice of the Kinh, in this case the Kinh almost has no rice paddy. The Paco with traditional cultivation of upland slash-and-burn, now considers rice paddy as the main food production. The Kinh with different perspective, left rice cultivation and shift to garden long-term cultivation at home garden (planting fruit trees), the Paco consider home garden for short-term crop (cassava, maize, ect) vice versa. With animal raising activities, the Kinh consider this as the main income source, while the Paco is more dependent on forest for NTFP collection for cash income.

Table 2: Differences b/w the Kinh and Paco in production

	Paddy (n=50)	Garden (n=45)	Animal raising (n=50)	NTFPs (n=50)
Pearson Chi-Square	17.949***	6.328**	10.422***	11.759***
Likelihood Ratio	23.406***	6.475**	10.986***	12.327***
Linear-by-Linear Association	17.590***	6.188**	10.214***	11.524***

Remark: *, **, *** = significant at 10%, 5%, and 1% level, respectively

Forest devolution and use right levels of ethnic groups

As mentioned above, almost natural land of Phu Vinh commune is forestland which was managed by one SFE, after SFE reform (2005), the land tenure arrangement in the commune is as in table 3 and figure 1. In fact, the reform of SFE give local people few chance to get more land, because almost forestland are still managed by state body – Aluoi Protection Forest Management Board (PFMB). A small area of foreland allocated to HHs (4.89%) of total natural land, the commune still manages around 15.82% land not yet allocation (table 3). Table 4 draws out a perspective of property rights status in forestland. With a small forestland areas allocated to HHs, local people continue to consider other forestland as the open access. Therefore, there are 83.3% of the Kinh and 69.2% of the Paco in surveyed group having forestland without land use certificate (LUC)

Table 3: Forestland tenure arrangement in Phu Vinh commune

	Private property	Commune property	Aluoi PFMB	Total
Land tenure area (ha)	133	430	2155	2718
%	4.89	15.82	79.29	100

Source: People's Committee of Aluoi district, 2012

Table 4: Forestland tenure in HH surveyed

Ethnic	Land without LUC	Land with LUC	%
Paco	18 (69.2)	8 (30.8)	100
Kinh	20 (83.3)	4 (16.7)	100
%	76	24	100

Source: HH survey (Percentage in parentheses)

To identify who take chance for benefit from forest devolution. This part focuses on the characteristics of HHs effect the use right levels of natural resources from the forest devolution:

(1) Level 1: Rights driven by resources- area of forestland the HHs occupy and NTFP collection

Table 5: Characteristics of HHs effect to Rights driven by resources

Explanatory variable	Forestland area (m ²) occupied by HH		NTFP collection	
	Coefficient Beta	Sig.	Coefficient Beta	Sig.
(Constant)	3109.490	.451	20.964	.001
Sex of HH head	1497.989	.628	1.023	.419
Age of HH head	-149.176	.095*	-.132	.015**
Education of HH head	-	-	-3.541	.017**
Ethnicity	5246.295	.046**	-3.944	.016**
Off-farm income	-	-	-5.265	.003***
Male labor in agriculture	9504.341	.004***	-4.187	.023**
Number_of_HH_members	-	-	-.730	.028**
Access to credit	1195.384	.635	-	-

Remark: *, **, *** = significant at 10%, 5%, and 1% level, respectively

There is the significant correlation between age of HH head, ethnicity and male labor in agriculture of HH with forestland encroachment and NTFPs collection. Other significant correlations are between education of HH head and off-farm income with NTFPs collection.

(2) Level 2: Right to resource through the way people invest long term or short term in the land

Table 6: Factors effect to investment (short or long term) in garden and forestland

Explanatory variables	Hill garden investment		Forestland investment	
	Coefficient Beta	Sig.	Coefficient Beta	Sig.
Sex of HH head	1.605	.108	2.232	.190
Education of HH head	-1.157	.148	-4.109	.018**
Off-farm income	1.706	.057	2.762	.060*
Animal rising Income	-2.005	.022	-3.591	.033**
Credit access	-1.002	.254	-	-
Extension_longterm_cultivation	-	-	.564	.511

Remark: *, **, *** = significant at 10%, 5%, and 1% level, respectively

There is the significant correlation between education of HH head, off-farm income and animal-rising income with long term investment in forestland and hill garden. Whereas, rural credit and extension play no role in long term use and investment on forestland.

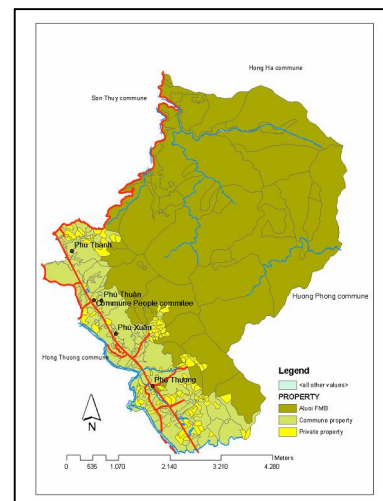


Figure 1: Land tenure at Phu Vinh commune

Perspective of ethnic groups about trend of forestland encroachment

Table 7 addresses the trend for future needs of two ethnic groups. The Kinh refers forestland close the community as the potential land to occupy and plant acacia for commercial purpose. While the Paco concerns the natural forest for food crop cultivation.

Table 7: Forestland use trend

	Distance to forest	Use purpose
Pearson Chi-Square	11.831***	8.937***
Likelihood Ratio	12.416***	9.487***
Linear-by-Linear Association	11.535***	8.714***

Remark: *, **, *** = significant at 10%, 5%, and 1% level, respectively

Conclusion and policy implication

Forestland encroachment is a normal phenomenon without difference between the Kinh and Paco when a small area of forestland was legally allocated to local people as a result of SFE reform.

Ethnic status, male labor in agriculture and age of household' head positively impact on forestland encroachment and forest dependency. While education level and off-farm income sources less depending on land of HH affect long term and short-term land use. On the other words, the Paco still depends on forest for NTFPs collection, and forestland for food cultivation. Therefore natural forest is considered as common property of the poor and ethnic people. The Kinh concentrates to long-term use and forestland closing the commune which tends to private long term rights and commercial purpose. The younger people are more depend on forest for their livelihood than the older ones.

Promoting forestland allocation especially prior to the Paco people should be considered as one alternative for reducing the forest dependency of local people. Besides, long term credit access - supporting for forestland long term use as well as the role of forestry and agricultural extension should be seriously paid attention government and donors. Off-farm activity generation for the young people is also potential to reduce the pressure on forest and forestland for cash income.

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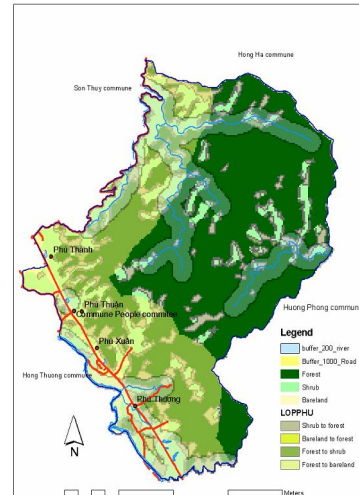


Figure 2: Invaded areas in natural forests of Phu Vinh people