



# Land privatization and afforestation incentive of rural farms in the Northern Uplands of Vietnam

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## ABSTRACT

Poverty and deforestation are critical issues in a number of developing countries where the policy framework is in many cases insufficient to provide rural people an incentive to afforest. This paper analyzes both the impact of land privatization on afforestation efforts of rural farm households in the Northern Uplands of Vietnam and the economic incentive of farm households on afforestation efforts. The determinants of afforestation by farm households were analyzed. Empirical findings were used to derive relevant policy implications for promoting forest rehabilitation in a country where the majority of forestland had been in State control prior to land privatization in 1994.

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## 1. Introduction

Poverty and degradation of natural resources are recognized as critical problems and have been given high priority in international development agenda (Nguyen, 2008). According to the Food and Agriculture Organization of the United Nations (FAO), the overall number of under-nourished people in the world in 2008 was 963 million, with an increase of 40 million compared to that in 2007 and the majority of them live in developing countries (FAO, 2008). Soaring food prices during the last years have been blamed for the worrisome situation of the fight against poverty. Despite food prices having dropped since early 2008, they remain relatively high compared to previous years (UNEP, 2009). With continuous food price fluctuation it is even harder to succeed in poverty alleviation and forest rehabilitation, making a big challenge in achieving the Millennium Development Goals (MDGs). From 1990 to 2005, the world lost 3% of its total forest area, an average annual decrease of some 0.2% (FAO, 2007). Moreover, climate change has affected millions of rural people who are dependent on agriculture, putting at risk their livelihoods and the conservation and rehabilitation of natural resources such as land, forests, and water.

In addition to adverse climatic conditions and political instability, many rural people in developing countries suffer from hunger simply because they are landless or, do not hold secure tenure, or else, their properties are so small that they cannot grow enough to feed

themselves (FAO, 2002). Land is becoming scarce due to the combined pressure of rapid population growth and increased commercialisation activities (Platteau, 1996). Therefore, there is a widespread belief that land reform is an important key to development, which could contribute to overcome poverty and forest degradation. According to the International Fund for Agricultural Development (IFAD), land reform has reduced poverty where it has been successfully conducted, and greater equality in landholding is associated with faster overall economic growth. Farmers who are owners or have secure tenure are more likely to invest in their land, which can improve environmental conservation (IFAD, 2001).

Land issues across developing countries have led to international interest (Ranaivoson, 2004). However, differences in socio-economic contexts, in land tenure systems, and in land reforms as well as inconclusive empirical evidence on the impact of land reforms have resulted in difficulties in generalizing the impacts and deriving sound policy implications (Nguyen, 2008). This leads to the importance of further studies on land tenure issues.

As the principal unit of agricultural production in developing countries and the main beneficiary of development interventions, farm households are directly affected by land reforms since farm land is their major factor of production. It is thus of interest to examine the impact of land reforms from a microperspective. The findings of such studies could serve as a basis for further development efforts which can help reduce poverty and degradation of natural resources in general and forest in particular.

With centrally-planned economic policy as in other former socialist countries where all major factors of production were either State

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property (e.g. land) or under strict control of the State, Vietnam had faced a serious economic crisis in the 1980s, paving the way for a gradual movement towards a market economy. As part of a major structural adjustment program, a new land law was enacted in 1993 as the basis for the allocation of land to organizations, individuals and households for long-term stable use (see VNA, 1994). All land users are provided with the so-called land use certificates which are internationally known as land titles (for a more detailed description and discussion, see Nguyen, 2008). The implementation of Land Law 1993 with the essence of land privatization could be considered a cornerstone in liberalizing agricultural production which, including forestry, was fundamentally changed from collective to individual basis.

This paper analyzes the impact of land privatization on afforestation efforts of farm households in a rural mountainous area of Vietnam, the Northern Uplands, in order to examine forces that shape the afforestation incentive of an important rural economic agent, farm households, in the context of rapid economic changes in Vietnam since the beginning of the 1990s. Answering the question of the economic incentive to afforest is important to understand the evolution of forest resources over the period and to target further policies for promoting forest rehabilitation.

The paper is organized in six sections. Following the introduction, Section 2 briefly describes the major changes in regard to institutional arrangement in forest management induced from the land privatization in Vietnam. Section 3 presents the theoretical setting, including the conceptual linkage between land privatization and afforestation, and the analytical model. Section 4 highlights the method and data for such analysis. Section 5 discusses the findings. Derived conclusions and policy implications are presented in the last section.

## 2. Induced changes in forest management in Vietnam

Vietnam is one of the countries that have experienced critical changes in forest resources. Three quarters of its land territory have mountainous and hilly terrain. Approximately 30% of the population live in or near the forest and depend for some part of their subsistence on forest resources (GOV, 2005). These facts indicate the importance of forest in terms of environmental protection, social stability, and economic development. There is also clearly a need to develop a sustainable forest stock to meet the demand of an increasing population and a growing economy.

According to Do et al. (2007) at the beginning of the 1920s almost the entire upland area was covered with forests. The ownership of forest and forestland remained in the hands of rural communities who controlled their use by customary law. Boundaries were elaborately defined by these communities with some land available for cultivation and other lands for forest preservation (Nguyen, 1995). However, during the collectivization period, all forest and forestland were nationalized and put under the management of a system of State-owned forest enterprises (SFEs) established in the early 1960s and other governmental organizations. Even though the government had attempted to conserve and rehabilitate, forests had been declining quickly until the mid 1990s. Forest cover decreased from 43% in 1943 to approximately 10–20% in 1990s. Especially between 1980 and 1995 natural forest area strongly decreased (Table 1). A large part of previously forested land was converted into agricultural use. However, at least equally extensive areas were left barren as they were so degraded that SFEs were unable to replant trees (Koninck, 1999).

The causes of Vietnamese forest decline in the second half of the last century are complicated and diverse, including forest conversion to farm land, forest devastation by wars, over-exploitation by governmental organizations, illegal logging, poor management capacity of the forestry sector and a deficient institutional and legal framework (Wil et al., 2006). From a management viewpoint, natural resources in general and forest in particular during the collectivization period were managed and used unsustainably due to (1) misguided policies such as resource exploitation orientation (2) inadequate institutional arrangements. The unique type of State property rights over all natural resources in general and forest resources in particular led to the fact that forest resources were *de jure* State property, but *de facto* open-access; and (3) lack of local participation in decision-making meant that local interests and insights were not taken into account. Past policy-makers perceived forest management as a process to protect forests from local dwellers, and to regard forests as a core of management. It resulted in conflicts in resource use between local people and State forest institutions such as forest rangers and SFEs. Consequently, forest was destroyed regardless of many efforts made by the State in terms of administrative punishment, law enforcement, and propaganda (Nguyen, 2001).

The unique management of the State over the entire forest resource led to the situation that, although most of the natural forest was granted to SFEs, millions of persons living near forest areas still harvested forest products that they needed for subsistence. A major reason for the reduction in forest area and degradation of forests was that forest did not have a real owner or manager. While huge areas of forest were granted to SFEs, they did not have sufficient manpower for effective management. In contrast, people who lived in or near forests for much of their livelihoods had no legal access to forest. As a consequence, they simply exploited forest products for survival, in contravention of forest regulations (Bui, 2001).

Therefore, serious deforestation was one of the main forces to push the renovation policy into practice, resulting in considerable changes in institutional arrangements for forest management in terms of two ongoing trends: (1) the shift from top-down to bottom-up, participatory approach to forest management. More attention has been paid to addressing local interests and involving local communities in decision-making and management processes; and (2) the transformation of the existing management structure. During the collectivization period, there was only one official management scheme, the State-owned. Presently forest resources have been managed under various prevailing schemes (Nguyen, 2001). This institutional arrangement has led to the transfer of part of forest and forestland from State organizations to private households and other stakeholders (Table 2). However, the majority of forest is still in the hands of the State. It should be noted that this is the result of the incomplete process of forestland privatization.

With these changes, Vietnam's forest has been gradually rehabilitated. National statistics shows an increase in total forest area after 1990. Forest area in 2004 increased by about 2,861,000 ha (31.18%) compared to that in 1990. The increase comprised of 1,549,000 ha of natural forests (13.87%) and 1,312,000 ha of plantation (163.5%) (Wil et al., 2006). The national forest cover increased from 27.8% in 1990 to 38.8% in 2007 (GSO, 2008). The government of Vietnam had a very ambitious agenda for forest development. According to the National Forest Strategy 2020, the total area of land with forest cover is to be increased to 16.2 million

**Table 1**

Forest change in Vietnam (1943–1995).

(Sources: Wil et al., 2006; Do et al., 2007; n.a.: not available).

Year	Natural forest (1000 ha)	Plantations (1000 ha)	Total (1000 ha)	Forest cover (%)
1943	14,300	n.a.	14,300	43.0
1976	11,077	92	11,169	33.8
1985	9,308	584	9,892	30.1
1995	8,252	1,050	9,305	28.2

**Table 2**

Forest area by owners or managers (1000 ha).

(Source: Vu, 2006; percentages in parentheses).

Forest type	Total	State	Households	Communal	Others
Total	12,307 (100)	9097 (73.9)	2871 (23.23)	285 (2.31)	54 (0.56)
Natural forest	10,088 (100)	7832 (77.6)	1999 (19.82)	249 (2.47)	8 (0.11)
Plantations	2219 (100)	1265 (57)	872 (39.29)	36 (1.65)	46 (2.06)

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