



# Cultivating forests: The role of forest land in household livelihood adaptive strategies in the Bac Kan Province of northern Vietnam



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## ABSTRACT

The paper challenges predominant forest-agriculture dichotomies in policy-making and research in Vietnam. Such dichotomies are not endemic to Vietnam, but permeates the whole climate and forest debate globally. It encompasses a perception that forests are of higher value kept standing and that agricultural practices, forest conservation and sustainable use of forests are mutually excluding activities. The study has been based on a survey carried out in the Province of Bac Kan in northern Vietnam. It applied a livelihood framework to investigate the multiple values of forest lands in household economies. The case demonstrated the complexities of adaptations to forest-sector policies, and that households in different institutional and agro-ecological settings use forest lands differently to generate livelihood incomes. It also showed that if all productive values are taken into account, relatively speaking forest lands represent more important livelihood assets for the poorer segments of households than the more well-off ones. The findings may have important implications for climate related forest policies, such as REDD + and REALU. Policy makers should engage with people and local communities, their social institutions and agricultural practices, and look at context-specific approaches for integrating the objectives of conserving trees, increasing carbon stocks and enhancing the total productivity and values of landscapes. The study recommends inter-sectoral and multi-stakeholder policy approaches integrating and mainstreaming multiple objectives, including forestry, agriculture, energy and other environmental services, such as carbon capture and storage, water provision, and biodiversity conservation.

## 1. Introduction

People living in and around tropical forests adapt and use forest lands differently, according to priorities, natural conditions, resource access, capacities, and institutional factors. This paper explores the role of forest land in household livelihood adaptive strategies in a reforestation zone in the Bac Kan Province of northern Vietnam. In Vietnam, the distinction between what is agriculture and what is forest land is strongly expressed in research and policy discourses, with a strict distinction between agriculture and forest land use (see e.g., UN-REDD, 2012; SRV, 2009). Such landscape ‘silos’ are also institutionally reflected in separate forest and agriculture organizational structures and in policy domains. Nevertheless, when exploring real, on-the-ground household adaptations, land use categories will be overlapping, fluent and flexible, and the appearance, use and perceptions of landscapes differ, even within geographically short distances (Castella and Dang, 2002). In northern Vietnam, forest land does not only play a vital role for extracting trees and other forest resources, but also for household

agricultural production. In such contexts, the distinction between what is environmental and what is ‘cultivated’ incomes becomes increasingly blurred. This also applies for the “values in-between”, related to agricultural incomes inside forest lands and environmental incomes on cultivated areas, both of which can face the risk of being neglected or forgotten in policy planning and implementation.

Such perceptions – or constructs – about land and land use have policy implications. In different countries and contexts, forests are found under various institutional arrangements, both in relation to their use and management regime. Forest land use zoning policies often have important implications for what type of activities that are allowed on the different categories of land, ranging from strict protection in national parks to agroforestry activities and plantations in the productive zones.

### 1.1. Forests climate policies

In recent years, the focus the role of conserving forests in reducing

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the emissions of global green-house-gases (GHG), and maintaining other environmental services such as biodiversity and livelihoods, has received increased attention, also in Vietnam. Within related policy initiatives such as Reduced Emissions from Deforestation and Degradation (REDD+), there is implicitly an assumption that many forests are of higher value kept standing than harvested. In this sense, REDD+ may have contributed to amplifying a predominant and – by many perceived as an inconsistent forest-agriculture divide (Palm, 2014). The ‘+’ in REDD was included to capture positive change within forests in terms of reforestation and afforestation activities (also known as *carbon stock enhancement*), and sustainable management of forests. Adding the ‘+’ was by many seen as particularly important for achieving poverty reduction, linking conservation, climate change and development (Ravindranath et al., 2012; Angelsen et al., 2012). Some have also called for so-called ‘landscape approaches’ or ‘integrated landscape management’ that can link social, economic and environmental objectives across scales (Sayer et al., 2013). In a climate context, such approaches are referred to as Reduced Emissions from All Land Uses (REALU) (Bernard et al., 2013; Noordwijk et al., 2009). Promoting sustainable livelihoods and active landscaping demand context-specific policies and approaches, and needs to take the variety of productive values of landscapes into account (Fox et al., 2014). Many have therefore argued that when agriculture and forest development goals are linked together in ‘climate-smart landscapes’, measures to reduce deforestation and GHG emissions from forest landscapes may also become more effective (Minang et al., 2015; Harvey et al., 2014; Scherr et al., 2012).

### 1.2. Sustainable livelihoods and incomes

In the paper, we discuss and challenge dominant agriculture-forest policy dichotomies, arguing that households use landscapes within a continuum where forest land has a vital role in household economies – in many ways. The multiple use of forests and forest land in household livelihoods are explored, and the interaction between livelihoods, landscapes and forest policies are laid out.

This is done by applying a livelihood framework (LF) (see Ellis (2000) and Scoones (1998)) combined with an institutional approach?. According to the LF, livelihood assets are combined to form livelihood strategies with particular outcomes (Scoones, 1998; Ellis, 2000). The paper applies the framework at the household level, assuming that households combine financial, natural, social, physical and human capitals to generate incomes and form specific livelihood strategies. Under certain (institutional and physical) contexts, planting forests and having access to forest lands could be viable livelihood strategies to be exploited in various ways.

The paper applies the LF with a general ambition to explore the diverse uses and outcomes that forests provide for household livelihoods. A key component of such analyses is looking at the relative role of different assets, activities and income opportunities at household level. What is the relative importance of forest incomes as compared to other livelihood sources, such as from agriculture and various off-farm sources, for different groups of households? In addition, how are different categories of land used in different ways to generate livelihood incomes?

The roles of ‘forest environmental income’ in household economies have been investigated by numerous scholars (e.g., Dokken and Angelsen, 2015; Angelsen et al., 2014; Wunder et al., 2014; Vedeld, et al., 2007; Cavendish, 2000), also in the Vietnam context (Thulstrup, 2014; McElwee, 2008). Environmental income is income that can be attributed to natural rather than human-made capital. It refers to income that is derived from natural rather than cultivated natural resources (Vedeld and Sjaastad, 2014). Sjaastad et al. (2005: 37) define environmental incomes as ‘natural rent realized through consumption or alienation within the first link of a market chain’. Conceptualizations and studies of forest environmental incomes do hence not include

incomes from resource extractions from for instance forest plantations (Wunder et al., 2014). Nevertheless, identifying and distinguishing ‘natural’ from ‘cultivated’ incomes is challenging and complicated in practical empirical research. How can for instance cultivated trees within forests be distinguished from natural trees within agricultural landscapes in income surveys?

### 1.3. Livelihoods, policies and institutions

The study also looks at the multiple effects of policies related to the distribution of forest lands and planting of trees among small-scale rural households. The perspective pursued in the paper is that policies, such as forest tenure reforms, reforestation policies and (future) REDD+ will have to relate and respond to existing institutional structures and agro-ecological contexts (Trædal et al., 2016; Vatn and Vedeld, 2012). Institutions at different levels mediate policy formulation and implementation processes, and through these, policies are interpreted, transformed and enacted upon by actors in multiple ways and with different outcomes and implications for livelihoods and landscapes. Our perception of institutions recognizes the diversity of social phenomena, and the creative effects of interactions between individual agency and social structures. Cleaver (2012) refers to these processes as ‘institutional bricolage’. These in turn may have impacts on how rural people organize livelihoods, with implications for resources and landscapes. The interrelationships between human activity and biophysical processes have by some been coined ‘productive bricolages’ (Ros-Tonen 2012; Batterbury, 2001).

Exploring household incomes and livelihood diversification strategies provided us with insights into household responses to policy instruments, and to how they utilized landscapes differently along the forest-agriculture continuum. The findings of the paper may hence have important implications for policy initiatives to reduce GHG emissions from forest landscapes and promote sustainable livelihoods. More concretely, the objectives of the paper were to investigate 1) the socio-economic characteristics of households in the study area; 2) how households in different contexts use forest lands in their livelihood adaptive strategies; and 3) the implications of the findings for forest related policy mechanisms, included market-based ones, such as REDD+ and PES. The paper starts by giving a brief presentation of the policy history of the forest sector in Vietnam. This is followed up by a review of the methodology and study area context. The results section presents the findings of the study, while the last part discusses the policy implications the findings may have for REDD+ and other innovative approaches to forest management and forest land use.

## 2. Forest sector policy development in Vietnam

Vietnam has implemented policies relevant for the sustainable forest management and carbon stock enhancement components of REDD+ long before any REDD policy had been put on the drawing table. A shift in Vietnamese forest policies took place in the early 1990s when measures to increase forest cover and conserve existing forests were implemented large scale in the country. These included the 327 (‘Regreening the Barren Hills’ Program) and the 661 (‘5 Million Hectares Reforestation Program’). The target was to increase the national forest cover from 28% up to the pre-decolonization level of 43% (Sam et al., 2004). These policies were seen as a response to the serious losses of forest cover and environmental degradation in the post-colonial period, mainly caused by large-scale state-led logging. This logging was carried out by the many State Forest Enterprises and accompanied the conversion of forest into agricultural lands. The policy shift was intended to reduce deforestation and degradation and also promote increased incomes from forests and forestry activities for households and communities. While the focus of the 327 program was predominantly on the distribution of trees and reforestation, the 661 also included the devolution of rights to forest land for households and

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