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The politics of forest transition in contemporary upland Vietnam: Case study in A Luoi, Thua Thien Hue province

Nguyen Thi Hai Van

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Thèse de doctorat

Présentée à la
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Institut de géographie et durabilité
de l'Université de Lausanne par

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Titulaire d'un
Master of Science on Forest and Nature Conservation
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intitulée

THE POLITICS OF FOREST TRANSITION IN CONTEMPORARY UPLAND VIETNAM: CASE STUDY IN A LUOI, THUA THIEN HUE PROVINCE

Marie-Elodie Perga

Lausanne, le 3 décembre 2021

Pour le Doyen de la Faculté des géosciences et de l'environnement

Professeure Marie-Elodie Perga

For my grandparent and my beloved family

This dissertation is part of the research for development (R4D) project #169430, "*Assessing the nature of forest transition in Vietnam: Ecosystem services and social-ecological resilience in locally managed forest landscapes*", implemented by the Institute of Geography and Sustainability (IGD), University of Lausanne (Switzerland), Consultative and Research Center on Natural Resource Management (CORENARM) and University of Agriculture and Forestry, Hue University (Vietnam).

The project is funded by the Swiss Program for Research on Global Issues for Development, a joint initiative of the Swiss National Science Foundation and the Swiss Agency for Development and Cooperation.

Preface: A moment of uncertainty for Vietnam's forests

For the little it's worth, this dissertation is dedicated first to all those people, both state and non-state actors, engaged in conservation and reforestation efforts that help Vietnam become the first successful 'forest transition' story in Southeast Asia, where the rapid deforestation has been followed quickly by a period of widespread reforestation since the 1990s. However, beyond the simple forest cover curve hides a variety of complex political, economic, and ecological processes. The beauty of the lush, green forest canopy conceals a continuous re-construction process of the forest landscape and forest people in the uplands. Vietnam's forests are currently a fuzzy and contested space of transformation along two seemingly different but overlapping splits: natural forest vs. planted forest, forest protection vs. timber production, and state will vs. villagers' reactions in forest governance, elements which I will highlight in this dissertation. Not intending to criticize, this piece aims to bring the current shape of the forest transition process into the debate and points to possible dynamics which are emerging but have not yet received sufficient attention. I call the current situation of Vietnam's forests a 'moment of uncertainty', for it is very difficult to predict what is next. Just as Arthur H. Westing stated in his post-war evaluation of Vietnam's forests in 1971, '*I am pessimistic but … no situation is a bleak as to preclude all hope. Although a lot of tension around forests has significantly debilitated its resources and continues to raise havoc with it, there are a number of countercurrents'*. And the most important thing is '*the Vietnamese have a love for their (forest) land, and plant growth is rapid in a tropical climate…Time and little assistance can make forestry a crucial aspect of post-war recovery*". I would like to re-use two sayings of Ho Chi Minh, President of the Socialist Republic of Vietnam (1949-1969) as recommendations for embracing the uncertainty and finding the way forward to a better quality and sustainable forest transition.

> "Vì lợi ích mười năm trồng cây, vì lợi ích trăm năm trồng người"
> (*To harvest a return in ten years, plant a tree.*
> *To harvest a return in hundred years, plant people*)
> Ho Chi Minh, President of the Social Republic of Vietnam, 1958.
>
> "Rừng là vàng, nếu mình biết bảo vệ, xây dựng thì rừng rất quý"
> (*Forests are gold, if we know how to protect and develop them, they will be truly precious)*
> Ho Chi Minh, 1962.

Abstract

The ‘forest transition’ (FT) is a simple but powerful concept. It links forest cover dynamics to macro societal, political, and economic processes and might provide lessons for a broader transition to sustainability. However, I argue that forests are highly contested political spaces. Changes in forests do not just happen passively with spontaneous regeneration of trees, but actors shape them. The over-reliance on a data curve simply based on forest cover hides a complex and broad range of political processes and actors who play crucial roles in the shaping and ‘transitioning’ of forests. A forest transition, as I argue, includes push-and-pull arenas of struggles and conflicts among actors to gain power over resources within every forest space.

This dissertation looks beneath the superficially smooth curve of forest cover increase to gain insights into its reality and discover how the phenomenon has unfolded, by whom and in what way. Drawing on a political ecology analytical framework, I engage with debates on forest governance, neoliberalization of nature, and agrarian transformation in the Vietnamese uplands. The dissertation focuses specifically on the transformation of forests and people over nearly three decades in A Luoi District in Thua Thien Hue Province in central Vietnam, which has a long history of state intervention and conflict over forests. I show that underneath the canopy of the forests, many other processes are hidden in time and space, and across structures and agency. The research draws inspiration from a relational ethnographic approach, and specifically involved field work in two communes in A Luoi district combining diverse forms of observation, interviews, surveys, and focus group discussions.

The findings are presented in four paper-based chapters, each of which focuses on a particular dynamic in the processes behind A Luoi’s forest transition. The first article seeks to enrich the literature on FT pathways by calling on the concept of ‘territorialization’. It focuses on the first dynamic of FT, the layer-upon-layer process of territorialization over time and in every single forest space. Reading FT through the lens of territorialization also reveals a transition of state-peasant relations that goes beyond relations of control and resistance and is best understood as ‘co-production’. The next two papers/chapters look in depth at two significant territorialization processes and their dynamics of resource control ‘from within’: smallholder acacia plantations and payment for forest ecosystem services. The second empirical chapter describes the emergence of new mechanisms of land use, land access, and property tenure, by which upland villagers claim forest spaces to their advantage, navigating between state policies and customary institutions to expand their plantation farms. It thus highlights the second dynamic of FT: a frontier of land control associated with the boom in smallholder tree plantations. The third paper explores

Vietnam's Payment for Forest Ecosystem Services initiatives by examining collective action outcomes in forest common-pool resource management. It represents the third FT dynamic: ecosystem services as a new value of forests leading to forest governance transitions. The final piece focuses on identity and livelihoods, investigating how upland ethnic minority people have been enrolled in state-making and participate in commercial acacia-centered livelihoods. Becoming 'new forest people' is the fourth FT dynamic. All these forms of transition connect, blend, and articulate each other to shape the real 'nature' of FT, which I call the 4D forest transition. It shows that, in practice, the anticipated forest transition is far less certain or predictable than the previous FT literature suggests. In the conclusion, I provide several policy recommendations in order to embrace these uncertainties toward more quality and sustainability of forest changes in Vietnam in the future.

Résume

La "transition forestière" (FT) est un concept simple mais puissant. Il établit un lien entre la dynamique du couvert forestier les processus macrosociaux, politiques et économiques et pourrait fournir des leçons pour une transition plus large vers la durabilité. Cependant, je soutiens que les forêts sont des espaces politiques hautement contestés. Les changements dans les forêts ne se produisent pas seulement de manière passive avec la régénération spontanée des arbres, mais les acteurs les façonnent. La dépendance excessive à l'égard d'une courbe de données simplement basée sur le couvert forestier cache un large éventail complexe de processus et d'acteurs politiques qui jouent des rôles cruciaux dans le façonnement et la "transition" des forêts. Une transition forestière, comme je l'affirme, comprend des arènes de luttes et de conflits entre acteurs pour obtenir le pouvoir sur les ressources dans chaque espace forestier.

Cette thèse se penche sur la courbe superficiellement lisse de l'augmentation de la couverture forestière pour mieux comprendre sa réalité et découvrir comment le phénomène s'est déroulé, par qui et de quelle manière. En m'appuyant sur le cadre analytique de la ‘political ecology’, je me suis engagée dans les débats sur la gouvernance forestière, la néolibéralisation de la nature et la transformation agraire dans les hautes terres vietnamiennes. La thèse se concentre spécifiquement sur la transformation des forêts et des personnes sur près de trois décennies dans le district d'A Luoi dans la province de Thua Thien Hue au centre du Vietnam, qui a une longue histoire d'intervention de l'État et de conflit sur les forêts. Je montre que sous la canopée des forêts, de nombreux autres processus sont cachés dans le temps et l'espace, et à travers les structures et les agentivités. La recherche s'inspire d'une approche ethnographique relationnelle, et a spécifiquement impliqué un travail de terrain dans deux communes du district d'A Luoi, combinant diverses formes d'observation, d'entretiens, d'enquêtes et de discussions de groupe.

Les résultats sont présentés dans quatre chapitres articles, chacun d'entre eux se concentrant sur une dynamique particulière des processus à l'origine de la transition forestière d'A Luoi. Le premier article cherche à enrichir la littérature sur les voies de la FT en faisant appel au concept de "territorialisation". Il se concentre sur la première dynamique de la FT, le processus de territorialisation couche par couche au fil du temps et dans chaque espace forestier. La lecture de la FT à travers le prisme de la territorialisation révèle également une transition des relations entre l'Etat et les paysans qui va au-delà des relations de contrôle et de résistance et qui est mieux comprise comme une "co-production". Les deux articles/chapitres suivants examinent en profondeur deux processus de territorialisation significatifs et leur dynamique de contrôle des ressources "de l'intérieur" : les plantations d'acacia des petits exploitants et les paiements pour les

services écosystémiques forestiers. Le deuxième chapitre empirique décrit l'émergence de nouveaux mécanismes d'utilisation des terres, d'accès à la terre et de régime de propriété, par lesquels les villageois des hautes terres revendiquent les espaces forestiers à leur avantage, naviguant entre les politiques de l'Etat et les institutions coutumières pour étendre leurs plantations agricoles. Il met ainsi en évidence la deuxième dynamique de la FT: une frontière de contrôle foncier associée à l'essor des plantations d'arbres des petits exploitants. Le troisième article explore les initiatives de paiement des services écosystémiques forestiers du Vietnam en examinant les résultats de l'action collective dans la gestion des ressources forestières communes. Il représente la troisième dynamique de la FT: les services écosystémiques comme nouvelle valeur des forêts menant à des transitions de gouvernance forestière. La dernière partie se concentre sur l'identité et les moyens de subsistance, en examinant comment les minorités ethniques des hautes terres ont été inscrites dans l'élaboration de l'État et participent à des moyens de subsistance commerciaux centrés sur l'acacia. Devenir de "nouveaux habitants de la forêt" est la quatrième dynamique de la FT. Toutes ces formes de transition se connectent, se mélangent et s'articulent les unes aux autres pour former la véritable "nature" de la FT, que j'appelle la transition forestière 4D. Il montre que, dans la pratique, la transition forestière anticipée est beaucoup moins certaine ou prévisible que ne le suggère la littérature antérieure sur la FT. Das la conclusion, je propose plusieurs recommandations de politiques publiques afin de prendre en compte ces incertitudes pour améliorer la qualité et la durabilité des changements forestiers au Vietnam à l'avenir.

Acknowledgements

My grandfather and my father are the two people who have always nurtured my educational interest: “Study, study more, study forever” (Học, học nữa, học mãi), indicating the endless learning process. I have childhood memories of my father looking at me with stern eyes, doubting whether I had studied enough for the day. He had put me in intensive training at gifted schools to generate my interests in mathematics, chemistry, and biology to become a doctor. What neither my family nor I ever expected was that instead of becoming a doctor of medicine, I chose to pursue a doctorate of philosophy.

As those who have known me long enough will know, my decision to begin a PhD in 2018 was a great surprise because my education career has been – to say the least – full of spontaneous and unexpected events. Who knew that one day I would be writing acknowledgments for my doctoral thesis? I can honestly say I did not. Yet, here it is.

At the University of Lausanne, I would like to thank the Environment, Society, and Development Group and in particular, my primary supervisor, Professor Christian A. Kull. I have learned tremendously from his academically sharp, highly strategic advice and optimistic vision, even beyond the boundaries of this thesis. I also want to thank two other members of my PhD advisory committee, Associate Professor Gretchen Walter and Dr. Roland Cochard, as well as other members of my super KULL team, Dr. Ross, Dr. Mialy, Dr. Hélène, David, Astrid, and Chanelle. My work has benefited substantially from the comments and questions from these colleagues; they sharpened my research ideas while working on the research proposal and critically strengthened my analytical skills while writing this dissertation. At the Institute of Geography and Sustainability, Madame Carole has helped me with administrative requirements from the University. I am absolutely lucky to have had the support from this team along the way. I fully realize that the quality of my thesis is so much higher because of their tireless support and guidance right up until the end, and I hope our collaboration will continue in future. Thank you so much for everything.

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completely able to follow the academic path. Thank you so much for your words of encouragement and the ‘brain massages’ from the beginning to the end.

Back in Vietnam, I want to thank the FTViet project team members, Dr. Ngo Tri Dung, Dr. Tran Nam Thang, and Mrs. Le Thi Diem Kieu, for enabling me to do this research and providing a network of useful people for information and validation. I also want to thank the PhD students in our FTViet project, Mr. Tran Quoc Canh and Mrs. Ngo Thi Phuong Thao, for all of their information and help. I also would like to thank my colleagues at People and Nature Reconciliation (PanNature), where I learned valuable knowledge about forest policies and became inspired by their tireless work for a better and more sustainable Vietnamese forest over the last 12 years.

In my research, the most important group of people has been the local community in A Luoi district, Thua Thien Hue, Central Vietnam. I remember how often I was surprised by the friendly way these communities collaborated in my research. I remember my hosts – Grandpapa Ho and Papa and Mama Ke – and the cozy family meals during my six months in the field. They are some of my most unforgettable memories. I am incredibly indebted to all the villagers who participated in my research and their help, reception, and giving nature.

My family has been very important in my PhD journey. I want to thank them all. I very much appreciate my parents’ patience during this process. As they have never questioned my decisions in life, they quickly accepted my undertaking and received it enthusiasm. And it is here that I would really like to thank them for stimulating me, and for their rock-solid belief that I would and could do this. Also part of my family, Nam beo and Huong teddy: I am so glad our roads crossed 17 years ago and have made us inseparable. ‘Thank you’ are not strong enough words for the unconditional love they give me.

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There are of course many more to thank, but I will be sure to thank you in person.

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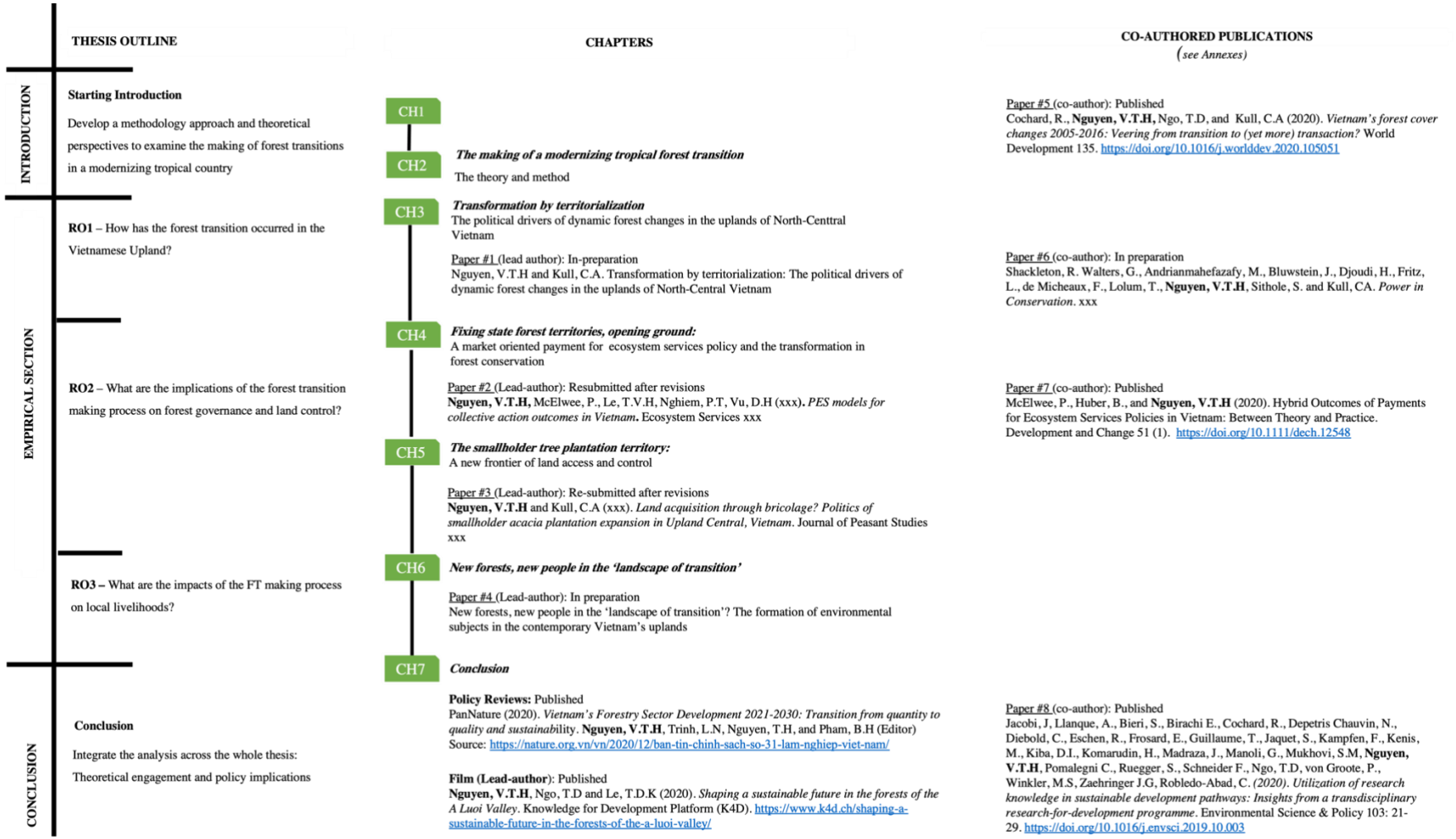
Acronyms

5MHRP: Five Million Hectare Reforestation Program
BCC The Greater Mekong Subregion Biodiversity Conservation Corridors
JBIC Japan Bank for International Cooperation
ADB Asian Development Bank
CPC: Commune People's Committee
ICDP: Integrated conservation and development (ICDPs)
IUCN: International Union for Conservation of Nature
UNDP United Nations Development Program
FCPF: Forest Carbon Partnership Facility
FGD: Focus Group Discussion
FLA: Forest Land Allocation
FPD: Forest Protection Department
FPDF: Forest Protection and Development Fund
FT: Forest Transition
FTViet: The Research for Development (R4D) project on assessing the nature of forest transition in Vietnam: Ecosystem services and social-ecological resilience in locally managed forest landscapes
TV: Television
FSC: Forest Stewardship Council
PEFC: Program for the Endorsement of Forest Certification
VPA: Voluntary Partnership Agreement
EU-FLEGT: The European Union Forest Law Enforcement, Governance and Trade Action Plan
NDC: Nationally Determined Contribution
NGO: Non-government organizations
NTFP: Non-timber forest product
NQ: New Research Question
NR: Nature Reserve
MARD: Ministry of Agriculture and Rural Development
MB: Management Board
MoF: Ministry of Forestry
PES: Payment for Ecosystem Services
PE: Political Ecology
REDD+: Reduce Emission from Deforestation and Forest Degradation
RQ: Research question

Overview of thesis outline and publications



CHAPTER 1

General Introduction

1.1 Introduction

One of the first communities I visited during my fieldwork was a Katu[1] ethnic minority community, called Huong Nguyen (see Figure 1). I asked my hosts to take me around the village and what I observed here took me completely by surprise. Located in A Luoi district, Thua Thien Hue province, one of the regions most destroyed by bombs and Agent Orange during the Vietnam-US war in the 1960s–1970s, the Huong Nguyen community is now in the throes of transformation.

In contrast to old stereotypes of many other Upland regions across Vietnam (Sowerwine 2004, Clement 2008), in which one would expect them to be characterized by a complex mosaic of swidden fields, bushes, young trees, and natural forests, Huong Nguyen has given way to a more simplified and compartmentalized landscape. Surrounding the back of the community is the remaining rich, natural forest that forms part of Truong Son Central Annamite Range, which is a humid rain forest region with some of the highest and most unique levels of biodiversity in Vietnam. Three large state forest owners (Sao La Natural Reserve, A Luoi Protection Forest Management Board, and Nam Hoa State-owned Enterprise), together with 23 household groups (with the support of international donors and NGOs), take charge of conserving and protecting these vast natural forests. Food crop fields (e.g., rice and cassava) and young natural forest patches have all but disappeared gradually from the low hilly slopes in the middle. Meanwhile, the tree plantation farms, notably of Australian acacias and rubber, have popped up everywhere: near people's houses, village roads, and covering many of the slopes around the villages.

After the war, Huong Nguyen villagers returned to their remote swidden fields in upland valleys. Relocated in 1996 to their current area, they have since been planting trees in the state forestlands and on their own lands as part of large-scale state-led reforestation initiatives started in the 1990s. I observed that all villagers, whether better-off or poor, whether old or young, are actively involved in commercial tree plantations. My conversations with villagers also revealed that labor wages from these plantations are their main source of household income. The experience of Huong Nguyen shows the anomalous context of the commercial tree plantation boom in which villagers are proactively getting involved, driven not only by market forces but also state interventions toward increasing forest cover.

[1] The Katu ethnic minority group is one of 54 ethnic groups in Vietnam. They are traditionally a forest-reliant group considered the first settlers in the Central Truong Son mountains. About 102,551 Katu people who live in eastern Laos (in Sekong province, along the upper Sekong River) and in the Central Vietnam (in Quang Nam and Thua Thien-Hue provinces) (GSO 2020).

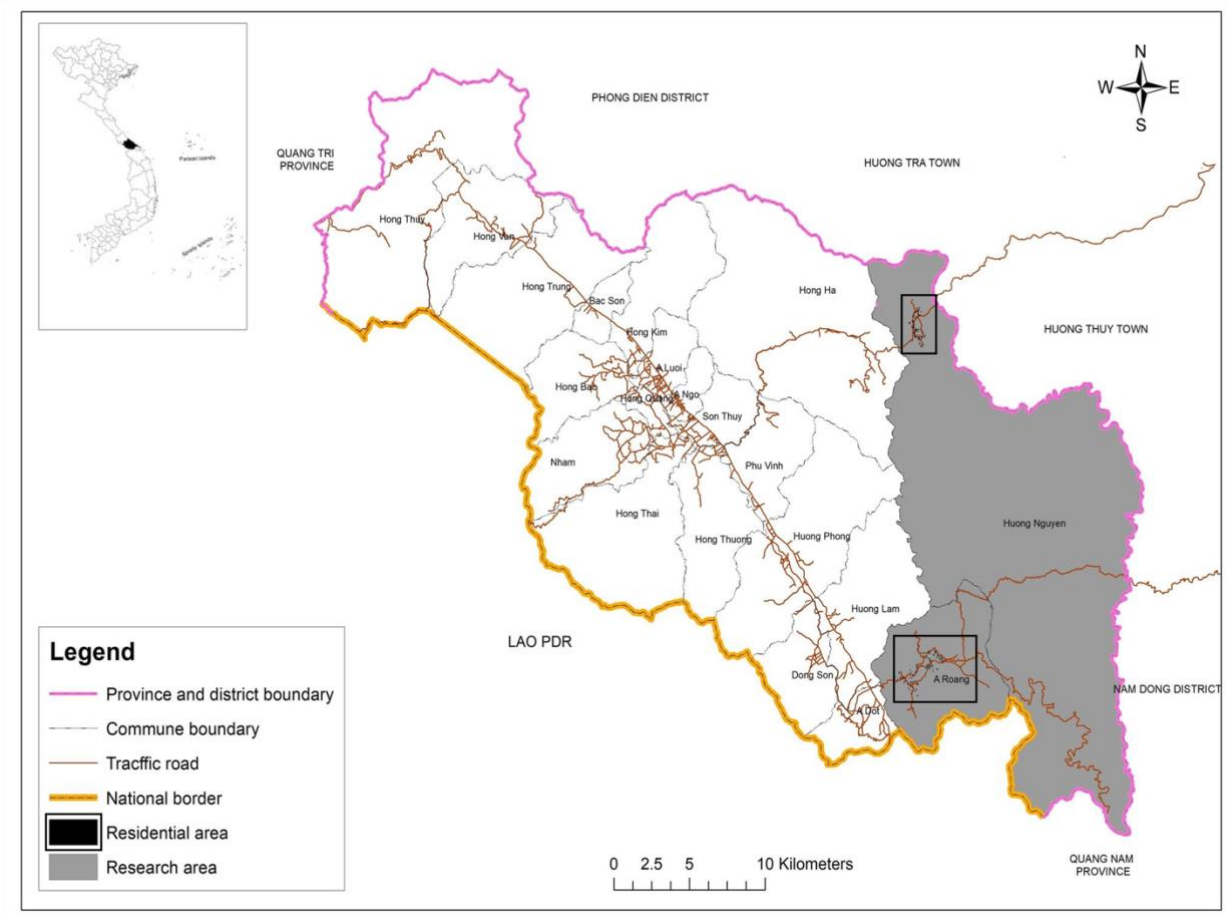


Figure 1 - Research site: Huong Nguyen and A Roang commune
A Luoi district, Thua Thien Hue province, Central Vietnam
(Source: produced by author)

Before 2013, Huong Nguyen people's tree planting efforts focused exclusively on re-greening the barren hills surrounding villages. Since then, they have begun to participate in natural forest management and protection activities. The State-led programs of forestland allocation and land-use certificates (or red-books, *sổ đỏ)* have incentivized Huong Nguyen people to become one of the official natural forest owners in A Luoi. They have received payment for their efforts in forest protection through a new innovative forest policy, Payment for Forest Ecosystem Services (PES), initiated by the Vietnamese Government since 2010, and particularly in anticipation of higher carbon payouts through on-going regional programs, such as on REDD+/FCPF[2].

Over the course of the fieldwork, I also carried out participatory observations with different actors, from farmers (both men and women), community forest protection teams, representatives from nearby state forest owners, the district forest management agency (*kiểm lâm*), and local authorities. We walked through the villages, the planted forests, and protected natural forests. We

[2] The Emission Reduction program in Central Coast, Vietnam, funded by Forest Carbon Partnership Facility (FCPF). Source: https://bit.ly/3y5B4fm

discussed their experiences with changes in landscapes and their lives – both positive and negative. While I initially passed on the situation of forest landscape change in Huong Nguyen as arising simply from my own perspective, I went on to hear similar sentiments from most villagers throughout the course of my fieldwork.

> "*In the past, the villagers lived high[ly] dependent on the natural forests. But since we moved here ... we engaged in acacia plantation to help the government re-greening bare hills surrounding here while also gain new significant incomes. But we are hungry for land now... Most of the forest areas in Huong Nguyen are under strict protection by both state forest owners and some groups of villagers. Meanwhile, if people don't plant acacia, there is nothing for them to live on. No land – forces people to encroach and clear the natural forests. But destroy[ing] forests now is illegal. Deforestation also leads to a lot of impacts, especially water scarcity for other cultivations... We are in a dilemma situation."*
>
> - Focus Group Discussion (FGD) #4, Huong Nguyen, April 2019

With this, I realized the beauty of the recovered lush forests and the improvement of living standards in the Upland community conceals underlying tensions around forests, lands, and forest livelihood – elements with which we would soon be confronted.

I also saw that the villagers' fear of landlessness was symptomatic of generations of tenure insecurity, exacerbated by the competing responsibility to protect nearby natural forests and desires to expand their acacia plantation farms, which are still considered state-supported activities to restore the forest landscape and reduce poverty. For the state management agencies, from the forest protection staffs, forest management boards, forest companies to local authorities, it is difficult for them to achieve the dual goals of protecting forests while maintaining a harmonious relationship with the local people to ensure the development of Upland livelihoods. There was a sense in the communities I visited in A Luoi that local people have been facing land hunger, leading to growing number of land tensions not only between local villagers and state forest management agencies, but also among villagers. All spoke volumes and posed many questions about the continued changes to the sustainability of the local forest landscape and people's lives and livelihoods.

A Luoi district and Huong Nguyen have been put forward as an example of 'best practice' for forest governance that has transformed a post-war destroyed forest landscape into a forest conservation-production cluster. However, as I examine from the point of view of local actors, this transformation just looks smooth on the surface, but underneath, it is much more complex and messier. This observation thus was pivotal in shaping my broader thinking about how can

make sense of this 'smooth surface-messy depth' phenomenon. Or in other words, exploring this messiness in-depth is the focus of the dissertation.

The following section provides an overview of forest transition at (i) Vietnam country level but situated in the broader political economy context of Vietnam over the last four decades, and (ii) at global level through a literature review. Together with my empirical observations in section 1.1, these sections play as the backbone to set the research objectives and the research questions. The chapter then presents the organization of the rest of this thesis.

1.2 Losing in transition: Forest change dynamics in market-oriented socialist Vietnam

1.2.1 A bifurcated forest transition since the 1990s

Vietnam, through the lens of FT theories (Mather 1992), has experienced the turn-around from rapid net deforestation to net reforestation since the 1990s, and towarded a stable tree cover recently (Cochard et al., 2020). Between 1943 and 1990, the country lost 5 million hectares of forests. Under the implementation of successive and massive state-led interventions, tree cover has increased from a low point of 26.1% around 1990 (Meyfroidt and Lambin 2008), to 42% of the country's land area by the end of 2020 (MARD 2021). The current tree cover has thus become more stable, equivalent to the highest coverage ever recorded, in 1943.

Within Southeast Asia - a highly biodiversity region still plagued by some of the world's fastest rates of deforestation, Vietnam, however, becomes a 'exception' (cf. Youn et al. 2017; Liu et al. 2017; Ashraf et al., 2017) – with more complexity in its occurrence in practice (Mather, 2007). Vietnam thus offers both empirical and theoretical allure as a research site due to its assemblages of historical, political, social, and ecological patterns, which cannot be captured in a simple U-curve concept. These elements have consciously and (even) unconsciously coupled with each other to create effects on the forests of Vietnam at all levels (cf. Meyfroidt and Lambin 2008; Lambin and Meyfroidt 2010; Meyfroidt 2013; Angelsen and Rudel 2013; Cochard et al. 2017; Dao and Yasuyuki 2017; Traedal and Angelsen 2020 among many). According to the Vietnamese Government's report reviewing the implementation of their forestry strategies 2006-2020 (MARD, 2020), beside the increasing of forest cover, there are positive impacts on setting the backbone for timber industry and export through the rise of smallholder tree plantations and the livelihoods of local communities, many of which are Uplanders.

The country has a long history of a dominant state role in all sectors, including forestry (Dang, et al., 2012). State control was first applied in the North of the country during the Vietnam-US War.

The Government introduced it to the South after the country was reunified in 1975. However, after the reunification, Vietnam's forests were over-exploited to meet the demands of the national economy in the period of post-war economic recovery. During the 1970s-1980s all forests were nationalized and managed by the system of more than 400 state forest enterprises (SFEs) (McElwee, 2016). Timber was not only important as raw material for rebuilding the country after the war, but also for exhausted government revenues through timber export. What resulted was unsustainable selective logging of timber with high economic value, exceeding the growth rate of natural forests. Corruptions also worsened the situation when the volume of logging in certain forest plots was often much higher than that of logging quotas (Dang, 2020).

At the same time, as To et al., (2014) observed, as SFEs were unconcerned with forest protection, upland villagers, many of whom are ethnic minorities, were relatively free to exercise their swidden cultivation in the forest and collect non-timber forest products (NTFPs) for their own use. However, in many other places, local communities were prevented from accessing forest by SFEs, resulting in tensions over the forests. The associated driving factors along this forest dynamic were diverse. They included population growth due to resettlement programs in mountain areas (the so-called 'New Economic Development Zones') and natural increase, forced collectivization of agriculture in the lowlands and valleys and so on. In combination, these factors virtually wiped-out Vietnam's prime forest areas, particularly in the second half of the 1980s, to the point that many SFEs were unable to operate due to the lack of timber in the forests.

These problems called for big reforms in the forestry sector. These were initiated as part of the broader political, social, and economic reforms, shifting from a central-planning to a market-orientation called Doi Moi (renovation) which Vietnam undertook at the end of the 1980s. Theses forest reforms were designed with dual objectives: (i) reducing deforestation and degradation through conservation and protection efforts and increasing forest cover through large-scale tree plantation restoration; and (ii) solving the conflicts between the state agencies and local villagers over the use of forests and supporting the improvement of local livelihoods to reduce pressure on forests. The reform also drew on the approach of 'shared governance', rendered in Vietnamese as socialization (xã hội hoá), promoting the participation of the whole society, both state and non-state actors, especially villagers in Uplands in forest restoration and protection efforts. That was followed by decentralization and devolution policies, (land) tenure reforms, the implementation of significant environmental and social policy changes and successes in agriculture and plantation forestry, and subsequent state-led efforts in large-scale reforestation and conservation programs Uplands.

The turnaround in forest cover since the 1990s in Vietnam is thus the outcome of a state-led process. It reflects the government's evolving emphasis and interests in forests in strategically zoning, prioritizing, and managing different forest spaces to increase forest cover and protect the remaining natural forests (cf. Sowerwine 2004; Dang et al. 2012; McElwee 2016 for history; To and Dressler 2019; Meyfroidt and Lambin 2008; Lambin and Meyfroidt 2010; Meyfroidt 2013; Angelsen and Rudel 2013; Cochard et al. 2017; Dao and Yasuyuki 2017; Traedal and Angelsen 2020). However, underneath the turnaround and increase in net tree cover is the bifurcation. These significant reforms and relevant successive interventions also pave the way for emerging and bifurcating clearly between 'natural forest' and 'planted forest'. The process also has led to the dramatic transformation but also tension in the relationship between different stakeholders, especially between the Government and villagers revolving around these two kinds of forests and their two purposes: conservation/protection and production - that I will describe in detail in the next section.

1.2.2 Lost in the contemporary forest transition

A forest transition (FT) has happened in Vietnam, yes (Meyfroidt and Lambin 2008; Meyfroidt 2013). But, as McElwee (2016: xi) points out regarding this transition, *"things struck me as not only incongruous but incorrect"*. Case studies by many authors, as well as detailed national and sub-national statistics also show the unevenness in Vietnam's FT, such as FT is not happening at all localities, the increase of forest cover is mostly based on the replacement of natural forests with monoculture plantation forests; and thus poses a number of doubts on the quality of forests. In addition, new forest governance tensions have also emerged along the process (McElwee 2016; Cochard et al. 2017, Cochard et al. 2020, and so on). Below I go into these problems one by one.

First, forest cover and land-use dynamics are highly place-specific (Traedal & Angelsen, 2020). Natural forest regeneration occurs mainly in the Northern mountains or the Central Coastal areas, in districts with steep slopes and lower suitability for agriculture, further away from urban centers (Meyfroidt and Lambin 2008; Cochard et al. 2017). In contrast, deforestation continues in the Central Highlands and Southeast Region.

Second, forest cover has increased each year according to official reports, yet this data also shows the high dependence of forest cover increase on newly planted areas – mainly small-scale, short rotation, fast-growing trees (acacia, eucalyptus, or even rubber), rather than a natural expansion/regrowth of 'real' forests (Cochard et al., 2020). These plantation forests are a result of the aim to reduce logging dependency on natural forests and rapid development of Vietnam's timber industry - which is the sixth most important export commodity of the country, with around

4500 registered businesses and significant incomes for millions of farming households (MARD 2017). However, the dramatic speed of establishing these forests squarely contravenes objectives for biological conservation and sustainable ecosystem management when these exotic species are known elsewhere for tendencies to become a biological nuisances and invasive species (cf. Kull et al. 2011). The booming of commercial tree plantations even has raised many new issues in terms of sustainable spatial forestland-use management (Nguyen, V.T.H, 2020; Nguyen & Kull, in press)[3]. In many provinces, the forest cover increase seems to have reached the limit as designated forestland areas have to compete with other forms of land use and even pose the risk of reversal through conversion. The speed of increasing forest cover has been relatively low during last 10 years, demonstrating this risk (Nguyen, V.T.H, 2020).

Third, contrary to the increase of 'quantity' in forest (tree) cover, the state of forests in Vietnam also shows the reverse transition in 'quality'. The dramatic expansion of new 'forests' cannot hide the fact that the quality of natural forests often remains poor while the persistence of 'pocket[s] of deforestation' have continued to show high levels of deforestation and biodiversity loss (see Figure 2). Forest quality thus has fallen – the area of rich and medium levels of stocking has declined while the area of poor forest has rapidly increased (Forest Science Institute of Vietnam, 2009). The latest data from the Ministry of Agriculture and Rural Development (2016), for example, shows that in the Central Highlands, the proportion of rich forests is only 10.4%, medium is 22.7% and the remaining nearly 67% are poor forests[4]. In addition, the new planted forests, mostly monocultures for commercial timber production in short term, are counted in forest statistics as replacing the loss of natural forests. This points to the fact that large-scale reforestation programs over the last three decades may have increased tree cover but have not been able to address the causes of deforestation. They have even led to a new concern of competition between planted and natural forests, especially in the context of land scarcity.

The introduction of market-based conservation initiatives over last decade was expected to combat deforestation, conserve the remaining natural forests areas as well as increase the 'value' of natural forests to create a balance with plantation forests. In these approaches, forests (natural) are now re-imagined through their ecological functions, like carbon sequestration, or water flow, hoping that the market will provide a more efficient, less expensive way to arrest degrading

[3] Nguyen, V.T.H and Kull, C.A. Land acquisition through bricolage? Politics of Smallholder Acacia Plantation Expansion in Upland Central Vietnam. Journal of Peasant Studies (under review).

[4] According to Circular No.34/2009/TT-BNNPTNT on criteria for forest identification and classification, Article 8 classifies forests based on timber reserves, in which: Extremely rich forests are forests with a timber reserve of standing trees of over 300 m3/ha; rick forests are forests with a timber reserve of standing trees of between 201-300 m^3/ha; average forests are forests which have a timber reserve of standing trees of between 101 and 200 m^3/ha; Poor forests are forests with a reserve of standing trees of between 10 and 100 m^3/ha; Forests with no reserve are forests having a timber tree average diameter of less than 8 cm and a timber reserve of standing trees of less than 10m^3/ha. Source: https://bit.ly/3yBrvoN.

activities than the traditional policies (McElwee, 2016). PES, which transfers funding from users of ecosystem processes to those who provide soil, water, and forest conservation, was first mentioned in official Vietnamese government policies in 2006 with the release of Vietnam's Forest Development Strategy until 2020. The strategy highlighted that PES was a potential mechanism for forest protection and biodiversity conservation, and revenue-raising. Government projections estimated that the country could derive US$900 million in 2015, growing to US$ 2 billion in 2020 from PES schemes. At the same time, another emerging policy would provide funding from international carbon buyers to forest-conserving communities, known as 'Reduced Emissions from Deforestation and Degradation" (REDD+). Since 2014, at least thirty-five REDD+ piloted projects have been operating in Vietnam, representing an investment of over $70 million (Forest Trend, 2014). And two national REDD+ programs, UN-REDD+ and FCPF, are still ongoing.

However, the PES policies exerted minor influence (none to negative) on natural forest cover (Cochard et al. 2020) over the last 10 years across the country. Furthermore, though Vietnam became the first Asia-Pacific country to reach eligibility for results-based REDD+ in late 2018, questions remain in terms of forest governance and local livelihoods safeguards. As McElwee and Nguyen (2019) in the interview highlighted that, "*in a few places [within Vietnam], people have actually shifted their livelihood strategies*," such as give up shifting agriculture in response to thinking they're going to get REDD+ payments, but those funds have not yet appeared. It thus posed a perilous dilemma between the carbon dream and the livelihood reality of local villagers in the ground (Nguyen, V.T.H, 2014).

These issues, consequently, lead to number of tensions in forest governance and forest-based livelihoods practices, especially between plantation/production vs. protection/conversion purposes (Nguyen et al., in press) or among actors like different state agencies and rural communities (Trædal, et al. 2016; Trædal and Vedeld 2018; To and Dressler 2019; McElwee, et al. 2020).

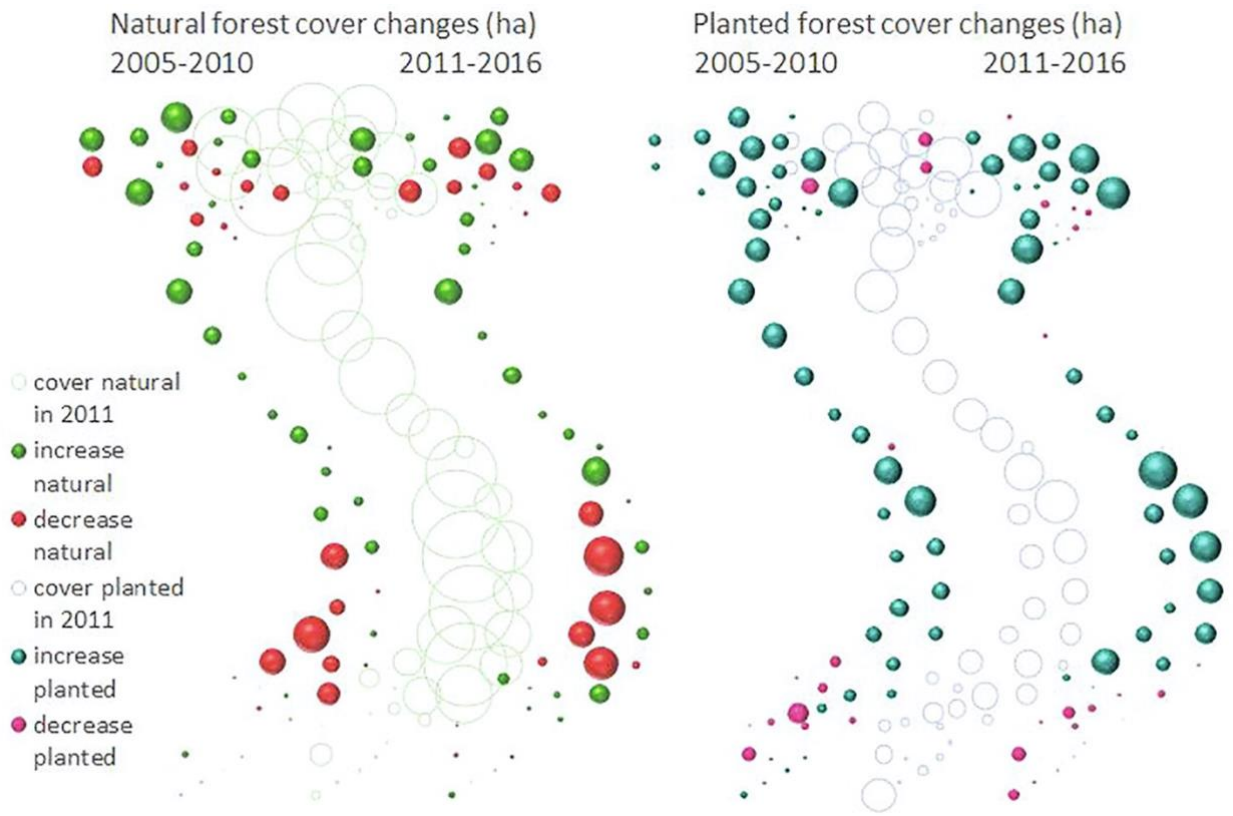


Figure 2 - Forest cover changes in Vietnam at sub-national level, 2005-2016

(Source: Cochard et.al 2020)

These existing problems surrounding FT in Vietnam today are not easy to solve, and there are many risks that this process could reverse, especially in the context that: (i) The reforestation and rehabilitation programs require large amounts of land, time and costs, but the results are not easily predictable due to environmental conditions. This would become a big challenge were the state budget for forestry cut; (ii) As a developing country, Vietnamese government at all levels always prioritizes converting forests for other forms of economic development, such as hydropower, mining, etc. At the same time, the high demand for land, which is known as the most important production resources for local farmers, in the rural and Upland areas has given rise to many conflicts and tensions that have not been resolved in the past. Yet another issue is that one reason Vietnam's forest areas increased in the previous period is the shift of deforestation to neighboring countries as Laos PDF, Cambodia and Myanmar. But now, stricter transboundary policies and measures have curbed this situation and gradually created new pressured on Vietnam's inland forests (Meyfroidt and Lambin 2009; Cochard et al. 2020, Nguyen, V.T.H 2020).

At the end of 2020, the La Niña monsoon cyclones and heavy rains led to environmental disasters across Central Vietnam, especially Thua Thien Hue province. Floods and landslides have cut thousands off from food and water, and hundreds more were displaced. This leads to public outcry

and questions in parliament: "*Ministers, something goes wrong here. How can natural forests be increased dramatically as your report? Are you sure that Vietnam has 14 million hectares of 'forests'? Did we count the areas of rubber, coffee, or other commercial crops into forest cover, didn't we? Giving what is happening in the Northern Central region and my observation in my hometown, Central Highland, I doubt the government's forest data"* [Mrs. Kso Bo Khap, National Assembly member, November 2020]. For the first time ever, FT is being evaluated not only by academics but also being questioned by policymakers and the public. Although there is no new policy direction yet, the critical voice at the National Assembly level shows the importance of critical analysis on how FT has happened and its long-term implications over the last three decades.

Combining debates in both the academic and policy realms reveals the fact that the unevenness of FTs across Vietnam's localities makes it extremely difficult to discuss the 'nature' of FT in the country as a whole. It seems there are many missing pieces of the glorified image of Vietnam's FT that need to be discovered, and this has motivated me to join this field.

1.3 A Review of Forest Transition Literature

1.3.1 Forest transition theory

The forest dynamic changes that I observed in A Luoi and Vietnam can be discussed in relation to the theme of the so-called 'forest transition' (FT).

An FT represents a country's historic turnaround from net deforestation to reforestation. It is a descriptive theoretical model proposed by Mather (1992), which posits that forest area in any given region undergoes a U-shaped curve from an initial stage of forest exploitation to recovery and forest expansion as a country develops socially and economically, and as its population increases. The process had been observed to occur along with urbanization and industrialization in various countries of the temperate zones (such as observed during the 19th and 20th century in the eastern USA, Canada, Denmark, France, Germany, Poland, Switzerland, Scotland, New Zealand, Chile, Japan, South Korea) (Cochard et al., 2017).

Angelsen (2007) described the gradual process of change as a continuum of four different stages (see Figure 3). The first stage, *undisturbed forest,* is a state in which forest is widespread and human pressure on the forest low, due to low population, low demand from forest, and little access to relevant technologies and infrastructure. A set of *triggers* linked to economic development starts the deforestation process, which accelerates through a set of *reinforcing loops*. It leads into the second stage, where the forest acts as a resource *frontier*. High level of deforestation during

this stage eventually lead to forest scarcity, which together with other socio-economic and political initiatives establishes and then strengthens a set of stabilizing loops, and lead to the third stage of *forest/agricultural mosaics*. These *stabilizing loops* will eventually dominate; taking us into the fourth stage of reforestation, termed as *the forest/plantation/agricultural mosaics*.

In this model, deforestation rates eventually slow down and, at a certain point of development, deforestation may give way to net increases in forest cover via natural and/or aided forest regeneration. The result is a U-shaped (or reverse J-shaped) curve of the forest area changes over time.

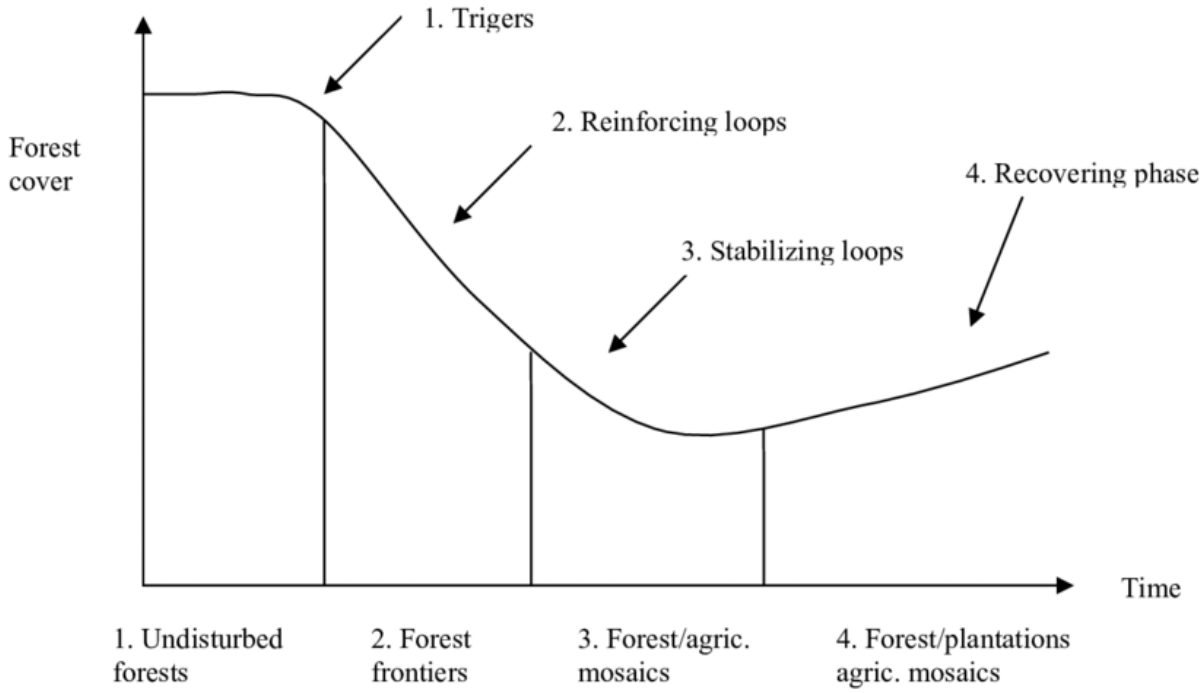


Figure 3 - Description of forest transition theory

(Source: Angelsen 2007)

Forest transition (FT) is a simple but powerful theory. It has both the theoretical and empirical allure of capturing in a single concept a pattern of historically interconnected changes in land use with potential effects not only within a country but also throughout the globe (Rudel et al., 2020). Starting with the seminal work by Mather (1992), a significant body of early FT literature has developed and diversified immensely over the recent decades with attention from different disciplines such as economics, land-use science, and social science (Barbier et al. 2010; Kull 2017; Mansfield et al. 2010; Perz 2007; Rudel et al. 2020). Many case studies point towards a 'globalization of the forest transition'- on all continents in countries of different development

levels (e.g Mather 1992; Klooster 2003; Rudel, et al. 2002; Mather 2007; Kull et al., 2007; Parés-Ramos et al. 2008; Meyfroidt et al., 2010; Lestrelin et al., 2013).

A vast quantity of the FT literature was predisposed to focus on forest 'quantity', or simply on tree cover. These studies connected data points about forest cover from the past and used macro-economic variables to explain how, in various ways, it could happen (de Jong, 2010). A variety of different pathways leading to FT have been proposed (Newby et al., 2014), including:

- The *forest scarcity pathway* occurs where the adverse impact of deforestation leads to political and economic changes affecting the forest sector.
- The *state forest policy pathway* describes a situation where concerns over forest combine with diverse concerns beyond the forest sector (such as modernizing the economy, integrating marginal social groups, promoting tourism or foreign investment by creating a 'green' image, or geopolitical interests) lead to strong state policy stopping deforestation and or promoting forest expansion.
- The *economic development pathway* occurs where economic growth creates non-farm employment, pulling labor off the land and inducing a reversion to forest. Areas of marginal agricultural land are abandoned to forest regeneration. Farmers may adopt more productive agricultural techniques in core agricultural zones, while farming on marginal lands becomes increasingly unprofitable. It is labor scarcity rather than forest scarcity that drives this process.
- The *globalization pathway* includes a number of processes: neo-liberal economic reform, labor out-migration, local manifestations of international conservation ideologies, a growing tourism sector, and land acquisitions by foreigners.
- The *smallholder, tree-based, land-use intensification pathway* occurs in marginal regions dominated by smallholder agriculture. A significant increase in tree cover can be associated with the expansion of agroforestry systems, fruit orchards, woodlots, gardens, hedgerows, and secondary successions on abandoned pastures or fallows that are sometimes enriched with valuable species.

Research on forest transitions thus has taken important steps forward from the initial theoretical model in expanding the knowledge on the driving forces behind forest recovery and descriptions of land-use change on the ground (Ashraf et al., 2017; Kull et al., 2007; Lambin & Meyfroidt, 2010; Meyfroidt et al., 2013; Rudel et al., 2005).

1.3.2 Key topics in current FT literature

Five key topics in current FT studies are useful to my work on Vietnam and also A Luoi. They are: (i) State policy-driven FTs; (ii) Multi-scalar FTs; (iii) Political-Social FTs or FTs making process; (iv) Neoliberal FTs and (v) Sustainable and Quality FTs. Below I go into these gaps one by one, explain where they stem from, and highlight how the present study addressed them.

1.3.1.1 A state policy-driven FT

Most FT studies highlight the assumption that a FT can only be delayed or accelerated by state policies. Angelsen and Rudel (2013) thus argued that lessons about FT's occurrence could be used as a guiding framework for developing appropriate policies. Especially given the significant role of forests in halting or reversing global climate change (Pan et al., 2011) and the political climate change commitments, the appeal of FT and its pathways to reverse net deforestation for policymakers and practitioners has increased dramatically (Meyfroidt & Lambin, 2011). Discussions on designing new forest-related policies or interventions to reduce deforestation and forest degradation in contexts that are in different stages of FT, have thus emerged (Rudel et al., 2020). For example, since 2007, the main international forest conservation effort has been through the Reducing Emissions from Deforestation and forest Degradation (REDD+) initiative, which has been launched globally. The main idea is to reward individuals, communities, projects, and countries that reduce greenhouse gas emissions. FT has therefore been used to frame discussions about climate and forests, including policy reports on options for REDD+ and setting reference levels, as well as the general literature on deforestation and conservation policies (see Holland and McNally (2010), for example).

However, Garcia et al. (2020) also pointed the fact that, despite the demonstration of political will and global efforts, forest loss, fragmentation and land degradation continue unabated and are reaching a critical point. This highlighted that there are always gaps between policies and diverse implementation pathways at different levels can also lead to unpredictable outcomes, and then influence on how FT occurs. The policies and their outcomes in practice are also influenced by many other factors, such as differences over the formulation and implementation of FT-related interventions. The FT literature has actually largely neglected this role of political and social interactions within forest spaces undergoing forest cover gain (Sloan, 2016).

The fact is that a FT does not just happen or occurred passively with the spontaneous regeneration of trees. Actors shape them. FTs are thus shaped by social interactions and actors' agency in addition to being ecological (Garcia et al. 2020). From state agencies to economic actors to villages, it is only and always actors who make decisions toward their action and behaviors and

then contribute to the outcomes of FT. Such gaps have sparked an interest in 'agency' in the FT process, especially related to institutional settings and actor's behaviors, strategies and decisions, which hare highly diverse and crucial to how FTs occur and contemporarily continue (de Jong 2010; Pichler and Ingalls 2021). However, it is still blind spot within the FT analyses.

1.3.1.2 A multi-scalar FT

The knowledge gap with multi-scalar FTs is similar to the gap on state policies. Most FT studies have analyzed national-level forest cover dynamics, though recent studies have claimed that FT is also appropriate for the analysis at different geographical scales. Some documented the FTs at a local scale (Cochard et al. 2017; Perz 2007; Perz and Walker 2002; Rudel et al. 2002), while others showed that the FTs also occurred at broader geographical scales, where for instance deforestation can be leaked to neighboring countries, or the expansion of international trade can bring a regional or globalization of the FT (Rudel et al., 2020). However, what is still lacking is a comprehensive multi-scalar FT analysis in which specificities embedded in the local development context, such as the dynamics of diverse rural stakeholders engaged in regional land/forest management are linked with national policies and global forest-related issues.

Forest-related policies and interventions are still commonly approached as a technical exercise (see Li 2007). Yet these processes remain firmly political interventions, imbued with ideology, beliefs and assumptions that are "*bound up and inseparable from the world of those it seeks to influence and shape*" (Jasanoff, 2004: 2). In Vietnam and Southeast Asia, or other countries in the 'Global South', more broadly, globalized forest governance co-emerged with historical state interventions and local discourse and practices that mediate resource access in changing landscapes (To, et al., 2017). As local actors negotiate and capture aspects of these interventions, they insert their own motives and desires to influence the extent to which these top-down forest governance policies and interventions. In this way, outcomes on the ground are co-constituted and re-articulated through identities, norms, discourses, and institutions across scales. Drawing on this notion, a new FT analytical framework across scales thus should be built to unravel more nuanced stories on how it occurs in practice.

1.3.1.3 A political FT

Forests are never entirely natural. Forests are 'political-ecological entities', "…*are created and always in the process of being created through politics and cultural ways of seeing, as well as through 'nature's agency' or biological, ecological, and socio-natural processes*" (Peluso & Vandergeest, 2020: 1089). The formation of political forests thus is not just by trees, shrubs, herbs, wildlife, but also 'dynamic spaces and political ecologies' (ibid: 1083), confluences with elements

in relationships between various people and their interests and ideas (Kull, 2017; Mansfield et al., 2015).

However, the notion of political forests and their manifestation in practice are never static or stand-alone. It is differentiated by the specific local, regional, national, and international factors and contexts articulating at particular moments (Peluso & Vandergeest, 2020). According to international agreements on climate change mitigation (UNFCCC, 2001), forests, in general, are referred to as minimum areas of 0.5-1 hectares with a tree canopy cover of more than 10%-30%, comprised of trees higher than 2-5 meters. But in practice, forests can be defined differently from each other and from non-forests, not only in terms of biophysical categories (e.g., species composition, structure, and successional state) but also analytical, functional or political categories (e.g., land cover, land-use, conservation, ecosystem services provisions, production and so on); but also differ among countries. For example: in Southeast Asia, plantations for timber and tree pulp are classified as forests while some smallholder tree plantations, such as rubber, have been classified as agriculture under the state regulations. Such classifications are not inevitable, nor they are the same in every country. Rubber (*Hevea brasiliensis*) is a forest tree and rubber plantation areas can be defined as forests in China. In Vietnam, it is more complex in that rubbers planted in forestland can be counted as forests, but rubbers planted in 'other lands' are not.

The definition of forests is the basis of shifts in territorial strategies, uses, and control, as the spatial expansion of plantations or prompts re-classifications of forestland or other interventions. The emphasis is thus open a new agenda to discover how forests are produced and then shape the forest transition in practice with a political perspective (Kull, 2017; Scheidel & Gingrich, 2020a).

1.3.1.4 A neoliberal FT

Due to a general reliance on statistical data at the national level, the FT is often explained by linking forest cover to macroeconomic variables and state-national policy interventions. These analyses tend to focus on differential land values and the concomitant shifting social priorities that reduce pressures on forest lands as the economy moves from extractive to industrial and post-industrial stages of socio-economic development (Turner & Robbins, 2008). However, in the contemporary era, this measured approach and explanation is being challenged because some FTs are linked to neoliberal-style interventions and processes.

Neoliberalism has become the political and economic ideology of the past 3-4 decades (Humphreys 2009). Defining neoliberalism is no small feat, but I rely on Castree's notion to include within the concept facets of privatization, marketisation, deregulation, public sector,

market proxy and civil society provision of state services (Castree 2008:142). The application of this ideology globally has led to changes in the form of commodity production, natural resources use and governance and the creation of new commodity trading networks. The materialities of resources, natures, and their environment have also thus changed (Peluso & Vandergeest, 2020). The changes also influence how forests are made, maintained, and transformed – or changing how FT making in practice. It is crucial issue but have received less attention in the FT literature. I will bridge this gap in knowledge here by taking very briefly three main neoliberal style interventions and processes that link to the FTs: (i) Conservation; (ii) forest tree plantation and (iii) governance mode.

First, in term of conservation, the commodification of nature (Castree 2003), 'selling nature to save it', has penetrated the international conservation agenda and numerous advocates have embraced the 'win-win' idea that market-based conservation can simultaneously conserve biodiversity and promote economic growth (Büscher, 2009). Through this idea, the conversion of natural goods and processes into tradable items has been accelerated and reinforced. As the result, programs such as payments for ecosystem services (PES), carbon offsetting, and private parks are creating new opportunities for new forest resource accumulation across the globe (Brockington & Duffy, 2010; Fairhead et al., 2012; Igoe & Brockington, 2007), which influences on the process of how FT occurs (Angelsen & Rudel, 2013).

The second trend that can be highlighted here is the expansion of forest tree plantations, especially fast-growing ones (such as acacia, eucalyptus, and pine) across the globe. Going beyond the important role for traditional industrial timber purposes, these plantations recently have been gradually played as 'flex crops' that have multiple roles and can be easily and flexibly interchanged (Borras et al., 2012). These types of tree species and their plantations have been an essential part of (i) the large-scale reforestation campaigns worldwide over the last decades; (ii) the new emerging 'bio' or 'green' economy; and (iii) overlapping roles in conservation and climate change mitigation initiatives (e.g., reducing emissions from deforestation and forest degradation 'plus' conservation, the sustainable management of forests and enhancement of forest carbon stocks (REDD+)). Land-use, access, and control for expanding forest tree plantations thus have taken place and influenced on changes of landscape, making of new 'forests' as consequently influenced on how a FT occurs.

Simultaneously, as has been described in the literature, the deregulation, decentralization, and devolution associated with neoliberalism is actually re-regulation in its creation of new governing structures and resources that sustain neoliberalism (Castree 2008; McCarthy and Prudham 2004;

Peck and Tickell 2002). In particular, the establishment of 'public-private partnerships' and the 'privatization of services' have underpinned the rising influence of non-state actors (private, non-profit/non-governmental organizations or public) on what were previously state domains. In terms of FT, the mix and match impacts of neoliberalism dynamics can be observed clearly in several countries. For example, in some Asian countries where the central governments were politically weak, government-supported reforestation programs did not occur, but several types of NGO-initiated programs did achieve widespread success (e.g., Rudel et al. 2020). So, in contrast to the state-centric focus of FT literature before, the neoliberal processes call for a new in-depth research agenda that pays attention to the production of FT by multiple actors. FTs can be seen as a political platform where the loci of interests, strategies, visions, power relations among different actors have been articulated, compromised, and negotiated to shape forest transition in practice. Such charges have again sparked calls for a return to the question of the agency of actors along the FT-making process - a blind spot of FT literature.

1.3.1.5 A quality and sustainability FT

A forest transition is an incisive turn-over from deforestation to forest regrowth within a specific territory, as captured in graphs by a U-shaped curve. The 'successful' FTs have been observed mainly from various countries during the 19th and 20th centuries e.g., the easter temperate zones of USA, Canada, Denmark, France, Germany, Poland, Switzerland, Scotland, New Zealand, Chile, Japan, and South Korea (Bae et al., 2012; Foster, 1992; Loran et al., 2016; Meyfroidt & Lambin, 2011). Describing the process of increasing forest cover, the previous literature thus often implicitly suggests FTs are the process toward sustainability. However, it seems the literature maybe pay too much attention to 'green marketing' about the superficial smooth curve of forest cover statistics, rather than a tangible complex in-depth assessment of environmental and social changes underneath. Therefore, the stereotype approach of FT literature challenges us to revisit and investigate more critically the 'nature' of sustainability in FTs.

The question is even more crucial in the context of the Global South since several developing countries have witnessed their country's forest cover moving from loss to gain over recent decades. However, the situation in these countries seems far more complex than what can be inferred from the temperate zones due to their unique ecological, social, political, and historical conditions (Garcia et al., 2020; Scheidel & Gingrich, 2020a; Turner & Robbins, 2008). In many cases, as Vietnam for example, the increase of forest cover is not "*an environmentalists' dream of restoring and expanding green forests, rather a nightmare of fast-growing but low value trees*" (McElwee, 2016: xii).

A bifurcation but also overlapping of forest spaces: tree plantations vs. conservation implies new forest landscape dynamics with associated quality and sustainability questions in both: (i) ecological aspects, like how have the parameters of ecosystem functions shifted under a binary FT? Will forest biodiversity remain stable or further decline? Will the forest cover be stable and maintain critical functions of soil protection, water provisioning, and disaster mitigation (e.g., floods, landslides during storms, forest pathogen and pest species outbreaks, etc.)? and (ii) political-social aspects toward the rural agrarian development and transformation, especially the formation of new forest-based people, shifting from traditional swidden cultivation and hunters or framed as forest destroyers toward active participation in commercial tree plantations and other forms of new conservation jobs related to the FT process. How have the parameters of forest governance and land control shifted under a binary FT? Who profits who loses in terms of land assets, stable/resilient livelihoods, and job opportunities? What does it imply in terms of spaces/impetus for local innovation and economic/sustainable creativity, including adaptiveness toward sustainable development?

In addition, the term repeatedly used to characterize development in any sector, especially in forestry is *tradeoffs*, namely tradeoffs between market efficiency and social/culture development and between conservation and forest tree plantations. Among these two halves, tree plantations and market efficiency invariably take priority. The tree plantation boom currently significantly contributes to economic growth, thereby supporting a timber industry that provides jobs and incomes for many people. Driven by the market forces, will this industry be expanded and became a new ‘deforestation driven' force, or stable and controllable, or follow a boom-and-bust pattern and lead to the rupture of the whole landscape?

The idea of quality and sustainability in the nascent tropical FT literature thus provided much scope for investigation. Unfortunately, the current FT literature is relatively silent on these issues.

1.4. Research objectives

At the onset of my research process, the question that initiated my exploration of forest change dynamics in the Vietnamese Uplands was quite straightforward: Who and in what way, under which mechanisms, have made the dramatic changes in the locally managed forest landscape in just a few decades, particularly intersected with successive state-led policies and interventions? My experience in Huong Nguyen, situated in the broader context of contemporary Vietnam’s forest transition and the ongoing debates in FT literature, was pivotal in shaping my research about the making of forest transition in practice.

The forest transition in practice. I argue, definitely does not just happen passively with the spontaneous regeneration of trees. Rather, much deeper than that, it is a continuously constructed and re-constructed process over time, with the participation of multiple actors across scales – not only the 'from above' national Government, but also from elsewhere by local authorities, international donors, NGOs, and market forces, and crucially 'from below' by the local villagers with their daily everyday practices. The approach lets me point out that a FT is not a predictable and straightforward process that starts 'from above', with the state's policies and interventions. It is a fuzzy and contested process, engaging with the history of power relations and struggles over forests, resources, and agrarian upland livelihoods. All interacting in one seemingly messy conjuncture, but this conjuncture works out and leads to dramatic forest changes.

As the result, the main aim of the research was:

> *To gain in-depth knowledge on the politics and practices of the forest transition and its long-term implications for agrarian social change and development in the contemporary uplands of Vietnam.*

In order to contribute to the current academic debates on what and by whom constitutes FTs, the research was also guided by a second aim:

> *To develop a framework for understanding the 'nature' of the forest transition-making process in a modernizing tropical country.*

1.5 Research questions

To address these research aims, the study sought to answer the following three sub-research objectives and research questions:

- The making of forest transition in the Vietnamese uplands
- The implications of the forest transition process on forest conservation governance and land control
- The implications of the forest transition process on local livelihoods and identity

1.5.1 Research question 1 (RQ1)

RQ1: *How has the forest transition occurred in the Vietnamese upland?*

Objective: *To trace the trajectory and the rationale of successive State forest-related policies and interventions over the past three decades and to what extent these interventions shape forest landscapes of Upland Central Vietnam in practice.*

This question addresses the first, second, and third discussion that I reviewed in the FT literature, namely on the state policy-driven, multi-scalar, and political-social FTs. As FTs in Vietnam have occurred along with the forestry reforms since the late 1980s, they have been shaped by the state's central emphasis and discourses on forests, and the implementation of these reforms. Studying these strategies and the agenda of the government underneath these multi-layered forest policies provides the background for discussing to what extent the state fostered the FT process. The main focus of my analysis will be the state's policies and interventions to promote: (i) Reforestation programs and industrial tree plantations, and (ii) Forest protection efforts and recent market-based conservation policies, such as Payment for Forest Ecosystem Services (PES). By embedding the state-deliberated strategies within the broader context of Vietnam's transformation after the Doi Moi policy in 1986, and also within the historical, social, and ecological conditions of a specific locality (Upland Central Vietnam), the question aims to provide the background contexts against which the FT has been triggered or shaped across scales.

Further, decentralization and forest devolution have become key strategies of forestry reforms to mobilize local resources for increased forest cover and sustainable forest management over the last three decades. The Vietnamese government thus has started to transfer large areas of forest and land previously controlled by the state to non-state actors, especially local villagers. The question thus sheds light not only on the state policy-driven pathway, but also allows me to explore the involvement of non-state actors, especially local villagers, in the process.

In sum, this objective will allow me to document the making of forest transition in the Vietnamese Upland across scales and by different actors.

1.5.2 Research question 2 (RQ2)

RQ2: *What are the implications of the FT-making process on forest governance and land control*?

Objective: *To investigate how and why these successive state policies and interventions affect local structural and institutional arrangements on forest governance and forest (land) resource access and control.*

This question addresses the third, fourth and fifth debates on a political-social FT, a neoliberal FT and sustainability challenges in FTs. While the first research question explores the FT-making process across scales and by different actors, this question is concerned with how it unfolds in practice.

The FT-making process entails important changes in Vietnam's forest governance regulations and practices by implementing successive forest-related policies and interventions. The process, in

fact, embarked through the big reforms of Vietnam's forestry. The Government has transferred their management power over large areas of forest(land), previously controlled by state forest owners or local authorities to local villagers. The government believes that the participation of local villagers, for example, in both forest protection and tree plantation, would improve local livelihoods for the poor and stabilize forest conditions to increase forest cover. However, although the policies are government-led, their outcomes are influenced by other factors, such as the nature of the implementation of these interventions across scales. It is therefore crucial to investigate how institutional settings have been formulated, modified, and re-arranged to allow this intervention to take place.

In line with the analysis in the first question, in this question, I also pay attention to two mainstream forest policies and interventions that are attached to the FT-making process: (i) large-scale reforestation and its link with the emergence of smallholder tree plantations and (ii) forest protection and the community forest management under the payments for ecosystem services schemes.

By answering this question, the research increases the understanding of the structural and institutional opportunities for FT, and the constraints on actors' agency and behavior in the face of state policies and interventions. Moreover, the impacts of the state policies and interventions, in terms of changing forests and on the distribution of power on forest management, resources access and control, and the unexpected outcomes (if any), are also evaluated.

1.5.3 Research question 3 (RQ3)

RQ3: What are the impacts of the FT-making process on local livelihoods and identity?

Objective: *To explore the concrete outcomes of the successive state FT-related policies and interventions that affect upland's forest people, especially their livelihoods and development.*

My first two research questions provide an in-depth study of forest dynamics that attends to several new aspects of forests and agrarian transformation in Vietnam Uplands. This question addresses all five knowledge gaps in the FT literature. What happens in an upland village populated by an ethnic minority group of traditional shifting cultivators and hunters, when, over the course of thirty years, traditional practices are banned and transformed, a protected area is established, natural forests are patrolled by selected villagers, and lucrative opportunities emerge in both commercial tree plantation and forest protection? How do these upland forest people deal with the changes in their forest landscapes, and to what extent do the changes re-shape their livelihood structure and strategy? In this question, I thus aim to examine (i) historical livelihood

changes and (ii) contemporary patterns of livelihood practices and development that have intersected with the successive state policies and interventions. I pay particular attention to the state programs for forest-livelihood development and villagers' transition from forest-dependent or shifting cultivation to permanent agriculture and commercial tree plantations. The current local dynamics around forest patrolling and forest extraction are also considered closely in my specific case study in upland Central Vietnam. Going beyond 'just' forest (tree) cover change, the question provides the necessary context for ascertaining a different kind of forest transition – the forest livelihood transition.

The order of the research questions illustrates how the FT process has occurred across different scales, from national policy level to an exploration of the specific and concrete case on the ground. The three research questions are further specified into sub-questions or linked to each other to form my four empirical paper-based chapters (see the thesis's outline (p.16) and Chapter #3 to Chapter #6).

1.6 Layout of the dissertation

My dissertation is a hybrid form, a monograph combining article manuscripts and additional chapters. The hybrid approach ensures that different theoretical bodies and approaches can integrate and cross-fertilize each other. It makes the whole thesis more satisfying for readers to learn about Vietnamese forest changes over time, and the complex political, economic, social, and ecological processes taking place underneath the forest canopy of the upland region. This initial chapter thus provided a problem statement and context to set the key claims that drive my dissertation. In Chapter #2, I explain in detail the methods, including a theoretical and conceptual framework that I apply throughout the research.

The empirical results section of the dissertation includes four substantive paper-based chapters to foreground the story of forest landscape transformation under successive state-led forest related policies and interventions over the last three decades. These interventions are explored in A Luoi district, Thua Thien Hue Province (as the main research site), but also other upland areas across the country. In Chapter #3, I seek to enrich the literature on FT by describing the real shape of the FT process in practice and calling on the concept of 'state territorialization'. It shows the will of the state to force changes in four sets of relationships surrounding forests: state-villager politics, institutions, land dynamics, and local livelihoods. It thus identifies a bifurcation in forest spaces in practice, as well as the emergence of two new internal territories, which form the basis of the two next chapters: community-based forest management activities and smallholder commercial acacia plantation activities.

Chapter #4 explores the impacts of Payment for Forest Ecosystem Services (PES) policy on local forest institutional arrangements and governance. Chapter #5 explores the local politics involved in the expansion of villagers' acacia plantation farms. Chapter #6 investigates the creation of new forest people or how local villagers' livelihoods and identities changed during forest landscape transformation. While focusing on the period of post-Doi Moi (renovation) 1986, each chapter has a broader temporal and spatial gaze.

Chapter #7 concludes the dissertation. Here, I seek to integrate the analysis from the different articles, re-visiting the theoretical challenges laid out in the previous chapter and arguing for the relevance of the analytical approach developed here for addressing these challenges. In addition, I discuss the policy implications of my research that contribute to the development of the new Vietnam's Forestry Development Strategy 2021-2030, toward 2050.

CHAPTER 2

The Making of a Modernizing Tropical Forest Transition: Theory and method

2.1 Approach

My approach is designed to address the research gaps, engage in the current FT debates, fulfil the research objectives, and answer the research questions I presented above.

2.1.1 Research context

The research was carried out within the framework of the Research for Development (R4D) project #169430 "*Assessing the nature of forest transition in Vietnam: Ecosystem services and social-ecological resilience in locally managed forest landscapes",* or 'FTViet' in short. The project got funding from the Swiss National Science Foundation and the Swiss Agency for Development and Cooperation and started officially in 2017. Based on the gaps in FT literature, FT Viet focuses on central questions: (i) Can current forest changes in study region be described as 'a sustainability-quality forest transition' (SQFT) and (ii) which factors are the most important to determine the course of the FT, and how they are influenced (via policy amendments, application of certain management regimes, etc.) to foster SQFT? The project framework seeks to identify processes and links between ecological forest change and socio-economic drivers (Figure 4).

I have started my Lausanne-based Ph.D. position since January 2018. I have co-led (with Prof. Christian A. Kull, my supervisor) the social science research work package of the project and prepare my Ph.D. thesis on aspects of forest change in Central Vietnam (such as deforestation/reforestation, acacia plantations) related to livelihoods, governance, and community aspirations. My dissertation is part of the work package on socio-economic research and addresses four research objectives in the project proposal, including: (i) at selected villages, document villager's livelihoods and how these interrelate with and influence forest resources (plantation vs. natural forests) in the village's vicinity; (ii) investigate the societal and institutional factors that shape forest types and gradients (and corresponding 'qualities'), including land tenure and management (and associated laws and policies), harvesting pressures, opportunity costs, and historical contingencies; (iii) describe how PES policies are currently implemented, how they are perceived by various stakeholders (directly involved or not), and investigate what impacts they achieve for the forest resources; and (iv) compare FT trends with the normative judgments and future visions of different rural actors, particularly poor households.

These four objectives were also considered and integrated into my three research questions presented above and the theoretical and analytical framework in the next sections.

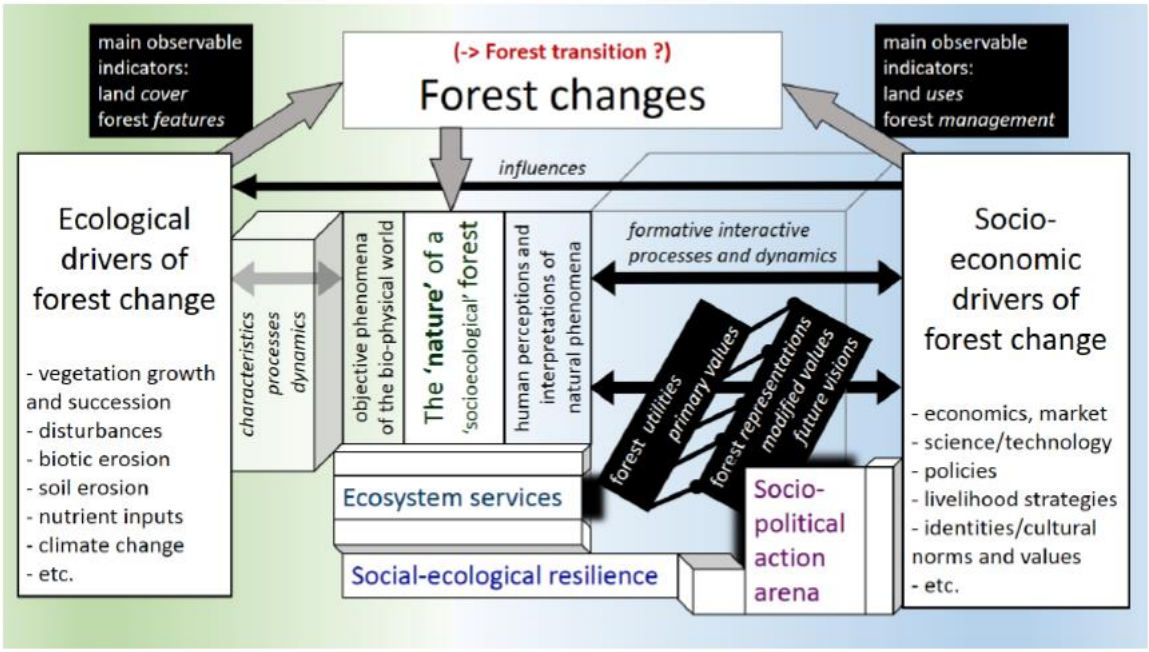


Figure 4 - The FTViet conceptual study framework

(Source: the project proposal by Cochard 2017)

2.1.2 Case study

At my 1st-year Ph.D committee meeting in 2018, I got a question: *Why's Vietnam? Why A Luoi? What features make you carry out your research there? What makes your case study interesting*?

In the beginning, my answer was straightforward. As mentioned in the previous section (1.4.1), the FT Viet project was already structured around the exemplary case of locally managed forest landscape transition. The project had already selected for the promising case study in A Luoi district, Upland Central Vietnam. My choice of case study research hence has to be consistent with the design that my research is part of. But then, through developing my own research proposal, I realize choosing the case study approach is very useful to meet my research objectives, answer my research questions, and allow me to engage in the robustness of theoretical debates.

First, my research is mixed of an exploratory, explanatory and descriptive study that aims to go in-depth with a lot of 'how' and 'why' questions to describe, understand and explain about the making of forest transition and its long-term implications on forest governance, land control, and also local livelihoods in Vietnamese uplands. The case study approach thus is very applicable for this type of study.

In addition, a case study offers not only a lively, thick picture of a social phenomenon but it relies on multiple data sourses and examples of ideas and relations to investigate a phenomenon within a predefined theoretical framework (STAKE, 1978; Tellis, 1997). To ensure research validity, the

case study approach employs a strategy of triangulation (Tellis, 1997). Researchers can triangulate not only data sources but also theories and methods to ensure the analysis of the case is based on the perspectives of the various actors involved (Yin, 1994). In term of methods, the case study approach can be combined with other research methods, it was also suitable for my study, in which I used a mixed method of data collection to gain insights into the complexity of the issue (Tellis, 1997). I also applied here Lund's (2014) conceptual strategy which enabled me to organize, mark out, emphasize and privilege the certain features of Vietnam and the selected local managed forest landscape in A Luoi. This approach suggested strategies to balance my analysis between the very specific vs the general, and the concrete vs. the abstract.

2.1.3 Critical Ethnography

The choice of case study research, as "*an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident*" (Yin, 2003: 13) also implies that certain methodological building blocks need to be defined as it is not possible to identify boundaries of the research object beforehand, such as forest transition process within the local context background. Ethnographic methods that focus on building arguments and examining social-cultural phenomenon, typically with a long duration (Schwandt & Gates, 2017), are a powerful tool to help me to elicit, identify and highlight the 'nature' of a FT (Marcus, 1995). By focusing on the processes of FT-making that happen in relation to successive state forest policies and interventions and certain forest practices in one specific locality, I try to capture the factors impacting the nature of the processes.

In addition to the focus on processes, another focus of this research is trying to visualize 'spaces' where the FT-making processes occur, by whom, and in what way. To do that, drawing on Long (1992) and also other scholars, as I employed the term of 'interfaces' – which are important 'spaces' where different types of actors and their interaction 'meet', resulting in a change or discontinuity. These 'spaces' highlight the relation between agency and structure as well as the role of the institution in shaping human behaviors/actions. For example: I was interested in the 'interface' where state-led policies and interventions, with their system of rules and structure that can both enable but also limit local actors' actions in practices toward forests, interacted with local actors and their own agency, their goals, perceptions, interests and values to encounter these externally introduced interventions. The local reaction in practices can reinforce the state-led structure or even break away from it and shape/re-shape their own social structure in practice. Such interfaces between agency and structure among actors over time, thus, can led to change in human behaviors and actions toward forests and gradually transform the landscape.

In order to study these complex agency-structure processes and interfaces, I employ a type of critical ethnography (Hart, 2004). This approach, basically, is not set apart from others of ethnography or qualitative inquiries by its data collection, but by its sociocultural interpretations. According to Hart, critical ethnography is a relational approach, which understands objects, events, and identities as dynamic, produced, and mutually constitutive. She argues that "*a processual and relational understanding refuses to take as given discrete objects, identities, places, and events; instead of it attends to how they are produced and changed in practice in relation to one another"* (p. 98). This approach helps me go beyond the mere examination of culture and cultural practices of ethnography but helps me to understand how the broader engagement of the local cultural practice in state-led policies and interventions can bring dramatic changes to the landscape.

Concretely, doing critical ethnography in researching the forest transition in A Luoi, Thua Thien Hue province meant I examine the changes in a forest landscape, in particular their intersection with the local actors (their lives and their forest-related practices) or external dynamcis as layer-upon-layer forest policy and interventions, development programs or commodity production for global markets in the past few decades. I meant questioning the forest transition in practice, I was interested in – objects like natural forests, commercial acacia plantations, swidden sites – by not taken them for granted in interviews and observations. Applying the relational approach, I had to ask people especially about their relationship toward these objects, their perceptions about them and their values, to what extent these objects related to their traditional forest practices, their identities, their lives and their plans for future. I also made an effort to make people to re-call a lot about the history of the landscapes and what the relevant significant events or big interventions that related to the changes in landscapes.

This 'connecting the dots' approach allows me not only for the understanding of the "nature" of FT in a broader historical context but also for determining real, plausible alternatives and possibilities for social change. I therefore analyze FT as historically constituted, paying attention to social complexities within a geographical place while considering interconnections beyond its boundaries. My approach is inspired by Massey's understandings of 'place' as a node of interconnections and 'space' as stretched out social relations (1994). Following this method, I argue that in order to understand the FT in a specific place such as A Luoi, one must pay attention to the complex social relations that link the locality to state, national, and global arenas.

2.1.4 Political Ecology

In the research, rather than taking a birds-eye view of forest transition dynamics and looking at growth of forest cover as the primary metric by which we ought to understand FT (see section 1.3), this thesis looks instead political and social aspects. From the bottom-up approach, I aim to examine how different actors conceptualize their relationships to different types of forests, how institutions shape these relationships between actors, and how multi-dimensional processes need to be part of the forest transition studies.

Whereas research has highlighted state interventions as drivers of FTs, in the thesis I link these successive state forest-related policies and interventions to FT over the last few decades as well as a broader process of agrarian transformation in the Vietnam Uplands to understand how forests are produced and thought about as 'dynamic spaces and political ecologies' (Peluso and Vandergeest 2020). In addition, while I do focus on a particular case – A Luoi – the case study does not seek to only understand the practice of forest landscape changes. Although the changes can be observed in this dissertation, and though they are certainly important, I am more interested in how particular conditions and people have emerged to shape and generate these outcomes. In short, my dissertation will focus on politics and power relations in the FT-making process.

Political ecology (PE) is rooted in critical social sciences, frequently adopts a constructivist or post-Marxist perspective, and focuses on power relations, conflict, and justice concerns associated with specific resource uses. PE also addresses land characteristics, such as tenure, access, and diverse forms of material and cultural land-uses, and establishes interconnections between political processes and environmental outcomes, including conflicts and social injustices related to land-use change (Scheidel & Gingrich, 2020a). In addition, political ecology tends to examine the power relations that occur between the state and local villagers in Southeast Asia's forests (Bryant et al. 1993; Vandergeest and Roth 2016). As this dissertation foregrounds the power relations of FT-making, forest governance and resource (land) access and control, livelihoods, social changes, and development of local Uplands, political ecology is a useful lens for me to analyze the FT-making process, especially from a historical and geographical perspective.

2.1.4.1 Relations of production

Karl Marx provides the basis of political ecology when he first articulated the importance of relations of production, which bound up with ideology, culture, and meaning, form the basis for understanding social relations more generally in society (Robbins, 2012b). Following this approach, I trace how the historical relations of forest (land) have changed and been changed, as well as how other relevant conflicts and tensions emerged around the process of increasing forest

cover. This approach provides a powerful tool for understanding FT's contradictions – essentially the limits to local development – that go beyond a framework characterized by just 'increase tree cover' or the surface of land-use change. It links FT outcomes to historically produced conditions that underpin those contradictions. By emphasizing the origin of the state's will to stabilize forest conditions to increase forest cover through successive policies and interventions, in both tree plantations and forest protection to PES, this approach provides a firm ground on which to suggest recommendations and alternatives.

While I foreground the relations of production in both tree plantations and PES forest protection, I also consider how these relations intersect and connect with other key relations associated within FT at the local level. In many cases, social relations around indigeneity of communities, land access, and conservation all play a role in understanding the limits of social changes and development along the FT-making process in A Luoi.

2.1.4.2 Actor-oriented political ecology

As mentioned previously, a blind spot of FT literature is agency of actors and the particular mechanisms that shape how FT happens. Attending to the diversity and individuality of human agency, actor-oriented political ecology studies (West, 2005) examined the variety of actors with divergent agendas that are typically at play. However, many political ecology studies that address agency in their investigation do not generally make the link with higher-level landscape, regional, or nationwide forest cover change (de Jong, 2010). Rather, West (2005) also cautions that many so-called actor-oriented political ecology studies conceptualize people's agency in Western cultural term as "*tendency to essentialize actors such as the state, NGOs, or local community organizations and treat them as monolithic entities*" (Bury, 2008: 208) that hold homogenous and stereotypical positions, rather than in local cultural and structural contexts. It therefore limits their critical contribution in FT analysis. Such charges have sparked calls for research on the question of agency in relation to FT, especially related to institutional setting and local actors' decision-making, which are highly diverse and crucial to understand the more nuanced FTs in practices. My thesis contributes to this area by using the actor-oriented approach in political ecology analysis, which offers nuanced insights into the subtle ways that FT is shaped in practice and into the diffuse sources of power leading FT, especially the state vs. local villagers.

I want to highlight that FT is not a simple and linear curve measuring tree coverage but reflects the operations of political actor networks that involve multiple actors, both inside and outside the state and across scales. The FT in the dissertation therefore is not a deterministic prediction but rather a forecast of how successive state policies lead to social-political and structural changes

and the extent to which they affect forest dynamics over time. In addition, I also seek to understand to what degree the role of different actors, like the government (through their policies and the formulation setting phases) and local people (through their reactions) contribute to the dynamic changes. I also highlight the effects of these with the influence of other external changes, such as liberalization of agricultural commodity markets and the emergence of new ecosystem services commodities.

2.1.4.3 Multi-scalar analysis

The question of the appropriate scale for FT analysis is debated. Most FT studies have analyzed national-level forest cover dynamics but recent studies of FT processes in Southeast Asia have claimed that FT is a more appropriate framework at different geographical scales. According to Traedal & Angelsen (2020), Vietnam has seemingly been able to shortcut the FT by successive environmental interventions, from post-war policies of timber extraction, tree plantations and forestland allocation, and more recent market-based mechanisms, to quickly reverse forest cover loss over just three decades. However, the predominant focus on national-scale mechanisms neglects more nuanced stories about the differentiated impacts and variegated outcomes of FT at sub-national and local levels (Cochard et al. 2017, 2020). The lower level forest changes and socio-economic trends are, however, not necessarily compatible with the standard FT framework (Traedal & Angelsen, 2020). Yet, they are still crucial pieces of the puzzle to understand how FT plays out in practice.

FT is also a more appropriate framework at multi-scales, especially in the context of globalization. According to Mather (2007), FT in Vietnam can only be explained if factors in addition to those used in the European and American cases are considered, for instance the global demand for timber products can lead to expansion of tree cover but for commercial tree production or the regulations on zero-deforestation through REDD+ initiatives can contribute to protect natural forests (Xu et al., 2007). Or as Meyfroidt et al. (2010) highlighted, lower deforestation rates in Vietnam can be linked to more deforestation in neighboring countries, including Cambodia and Laos, and international trade can bring about a globalization of the FT.

In the dissertation, I therefore also attend to multiple processes of structure and agency that take place at various scales. For instance, villagers' conceptions of forests have shifted over time with different state-led policies and interventions or forest livelihood practices of using the forests as a source of land, food, and income. Transitions in forest use have been driven by both national policies and local governance, implemented by different actors at different spatial scales. To understand local villagers' agency in relation to state forest-related conservation and development

interventions, I considered their historical legacy and villager's customary practices, which avoids taking a mere 'snap-shot perspective' of contemporary forest practices.

At the same time, before political ecologists started to unpack human agency, Blaike's (1985) analysis of environmental degradation examined how socio-economic and political economic processes operating at different scales forced cattle herders to use marginal land for grazing, which resulted in desertification. However, Blaikie (1985) and other structuralist political ecology studies arguably conceived of these different scales as hierarchical: "*pregiven socio spatial containers such as rural-urban, local, regional, national, and international"* (Zimmerer & Bassett, 2003: 3). Subsequent developments of constructivist and actor-oriented Political Ecology have shaped a more interdependent conception of multi-scalar analysis. So-called 'political ecologies of scale' draw on the geographical literature on scale and the social production of place (Lefebvre 1991) to consider how processes at different spatial and temporal scales interact and how these scales are context-contingent and socially constructed (Brenner, 2001; Lefebvre, 1991; Rangan & Kull, 2009). For that reason, political ecology provides a useful lens to examine a multi-scalar FT in practice.

I have laid out the methodological approach used in this dissertation. In the following sections, I discuss the literature in which I engage and my theoretical framework to answer these research questions. My theoretical framework is firmly situated within political ecology, influenced by the works of the studies of Political Ecology of the forest in Southeast Asia, that inform and answer my study on the politics of forest transformation and questions on long-term implications for forest governance, agrarian social changes and development in Vietnamese uplands. In chapter #3, I show how I used the theoretical perspectives to design a framework to examine the making of forest transition process across scales and by different actors. The implications of this framework to answer the second and third questions on different aspects as forest conservation governance, land control and local livelihoods then are described in Chapter #4, #5 and #6, respectively.

2.2 Political Ecology of Forest Changes in Global South tropics

As this dissertation aims to examine the making of FT in practice in the Vietnamese Uplands, its theoretical framework is hence firmly situated within the field of political ecology of forests. In this section, I make a review of useful concepts in political ecology to discover the aspect of forest changes in Global South tropics, often drawn from studies of forests in Southeast Asia – the region where my study site located, but also important studies elsewhere in Africa or South Asia, in order to set the basic for framing my research.

> *Forests are highly contested spaces, the arenas of struggles and conflicts, where both trees and forest dwellers usually find themselves on the losing side.*
>
> (Doornbos, Saith and White 2000:1)

As a region with varied agrarian and ecological zones, coupled with it diverse actors and extremely rapid ecological and social change, the forests in the Global South, especially Southeast Asia (SEA) Uplands are best portrayed by Martin Doornbos, Ashwani Saith, and Ben White in the special issue of *Development and Change* (2000), titled "Forest: Nature, People, Power". The authors highlight the crucial societal and political character of SEA's forests (also see in Robbins (2012)), where there have been on-going struggles, conflicts, and movements involving various stakeholders with diverse interests. The complex setting has made the region an important site for developing political ecological approaches to many important issues of regarding forest change (Bryant et al. 1993) that have animated global environmental debates (Vandergeest & Roth, 2016). For example, Blaike & Brookfield (1987) with their multi-scalar approach that follows the 'chain of explanation' outwards and upwards, examining the processes and actors who have the most influence on forest management, and Bryant and Bailey (1997) with their history of forestry and their much-cited text *Third World Political Ecology*. Peluso (1992) in *Rich Forests, Poor People* helped to initiate a rich research tradition on forests and people, with rich historical records of how different classes of forest villagers in Indonesia were marginalized by state forestry. Further, Vandergeest & Peluso, (1995) and Vandergeest (1996) developed 'territorialization' and provided a powerful analysis of how the state's historical spatial practices and zoning policies helped create a forest regime that control local villagers and their needs.

As Nevins and Peluso (2008) argue, the region is still renowned as the site of some of the world's fastest growing, most dynamic, and diverse economies. Over the last several decades, especially in the context of neoliberalism and globalization, SEA has witnessed growing economies, intensification of resource extraction and use, an acceleration of domestic consumption, expanding export-oriented manufacturing in the high-tech industries, and advanced commercial agricultural production. These changes have touched the lives of millions of smallholders and forest-dependent people. In some cases, this has led to widening social and spatial inequalities and the concentration of resource ownership that has resulted in part from large-resource enclosures and exclusions. All of these new dynamics and the ways particular sites, resources, and people have shaped them, have been documented by more recent authors, like Li (2007, 2014), Vandergeest and Peluso (2006), Hall et al. (2011), and McElwee (2016).

2.2.1 Governmentality, Power and Forest Governance

Most contemporary states in SEA and elsewhere in the Global South see the forests as an important source of state revenue and ecological values. The study of state forest governance has thus become a prominent theme since the 1990s. Many scholars build on Foucault's concept of governmentality, as the 'conduct of conduct' or "*the ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics*" (Burchell et al., 1991: 102) (also see Vandergeest and Peluso 1995; Rose, et al., 2006; Li 2007; McElwee 2016). The concept illustrates that state power is not necessarily an oppressive or constraining force, but rather should be seen as "*operates through the internalization of social norms and ethical standards*" (Fletcher 2010:173) to enable social actors and structure to function. The process, consequently, facilitates a form of state governance that control people not by force but more 'intimately' by shaping people's identity, aspirations and also agency (CEPEK, 2011).

Other scholars, however, have criticized the overreliance on Foucauldian theorization in political ecology, which has, for instance, left largely un-examined the extent to which state governmentality actually shapes citizens' attitudes and agency (CEPEK, 2011). To balance this, there is the trend toward an actor-oriented approach (see McElwee 2016) to examine how state governmentality has been implemented, travelled along the network of actors and has affected local people, especially in terms of livelihood strategies and forest-related agency and behaviors, paying particular attention to both the intended and unintended effects of state policies. Many other cases illustrates that the 'conduct of conduct' also springs from multiple sources and locations (Basset & Gautier, 2014). Several scholars have recently examined the agency of non-state actors in terms of governmentality, such as NGOs and international donors participating in the establishment of protected areas (see Corson 2011), or local villagers, such as Carr's (2013) conceptualization of "*livelihoods as intimate government" suggests that state agents, villagers, and household members all shape people's agency through different, and subtle, tools of coercion*" (p. 77).

More recently, a governmentality perspective on neoliberal forest-related interventions, such as PES schemes and reforestation programs, leads to the trend to examine how they are implemented and seek to change environmental behavior. The shifting approach in forest governance also reflects the differences between 'neoliberal governmentality' and 'disciplinary governmentality', that mentioned in the 'birth of biopolitics' (Foucault 2008:260). Under 'disciplinary governmentality', forest governance rules, regulations, and even propaganda, for instance, are state tools. But under the neoliberal payments as PES, the governance mode which is known as

"*seeks to create external incentive structures' to motivate behavioral change*" (Fletcher 2010:173).

In my use of governmentality, I employ a polycentric approach. The approach places its emphasis not just on the state, but also local villagers, and the diverse and varied actors situated at multiple scales between the state 'from above' and villagers 'from below'. It provides me a useful lens to analyze how successive state policies and interventions shape practice and the political reactions of diverse non-state actors to them. In addition, apart from characterizing the governmentality of successive forest-related policies and interventions over time, I also employ the shift from 'disciplinary governmentality' to 'neoliberal governmentality' to understand if and how new neoliberal interventions, as PES, are affected by villagers' behavior and agency, as previous governmentality studies (Rose 1999; Watts 2001), that have been critiqued for being "*too hasty in accepting the power of official discourse to people's behavio*r" (Mathews, 2005: 799).

2.2.2 Territorialization and resource access and control

The work of Vandergeest and Peluso (1995) focuses on 'state territorialization'. This concept refers to the "*process by which states attempt to control people and their actions by drawing boundaries around a geographical space, excluding some categories of individuals from this space, and proscribing or prescribing specific activities within these boundaries*" (ibid:257). The concept also refers to the exclusion or inclusion of people within specific boundaries. It is a strategy of resource governance that is central to modern state-making.

In the uplands of Thailand, Vandergeest (1996) notes that the process of state territorialization involves three stages: the creation and mapping of land boundaries, the allocation of rights to 'non-state actors', and the designation of specific resource use by both state and private actors within specified territorial bounds. For example, first, the government declares all forest areas that are not claimed by permanent cultivators or forest agencies as forest and places the areas under the direct control of the Forestry Department. Second, the government designates portions of the forest as reserves and protected areas, in which many activities of the villagers, such as swidden cultivation and the harvest of non-timber forest products, are prohibited. Third, using land classifications, the government maps all forestlands and non-forestlands. The maps serve as the basis of the government for controlling people's activities and use of forest resources.

As part of territorialization, the state uses other techniques to maintain control over forest resources. Peluso and Vandergeest (2001) broaden the definition of 'culture of control' by pointing out techniques of 'power' like territorial zoning and mapping, enactment of laws to set up boundaries for forest inclusion and exclusion, establishment of state agencies to enforce the

laws, and designation of forest police to protect the forest and make sure that the laws are enforced. Since Vandergeest and Peluso's (1995) writing on state territorialization, in a series of articles in 2001 and 2006, they elaborated on the concept using Foucauldian genealogical analyses of SEA 'political forests' and 'customary rights'. According to Peluso (1992), the state laws which define and determine boundaries of what is allowed and not allowed, constitute the formal elements of control, while terror, torture, or fear make up the informal elements. These categories are found in the four components of control used by the Indonesian state to restrict access of local villagers to forest resources. First is control of land. State legitimacy is founded on this type of control. Control over land is secured by the recognition of rights by others. The state demarcates specific territories as forestland, claims all resources in these territories as state property, and places these directly under the control of state agencies. Second is control over labor. This is important to ensure the profitable exploitation of forest products. Third is control over forest species. This is crucial in achieving the objectives of forest use, such as game or watershed protection. The state maintains its monopoly by levying taxes or limiting trade and transportation of certain species (Peluso & Vandergeest, 2001). Fourth is control over ideology. This type of control is manifested in the state laws which legitimate state authority over the forest. In short, these four types of state control over forest resources ascribe to the state its multiple functions with regard to the forest: landlord, conservation institute, and forest enterprise.

This pattern is also found in other countries in SEA (Hirsch and Warren 1998; Li 1999). Especially in Vietnam, the government divides forest territories into different economic and political zones (political forests – see Cochard (2020)), then re-arranges the people, especially Upland people, according to the zones, and sets up the state agencies that will operate both territorially and functionally to control the people and the zones (Sowerwine 2004; To 2015; Turner et al. 2020).

Many political ecologists and other scholars have since drawn on the concept of territorialization in their analyses of property, access, land rights, and livelihoods (Li, 2007; McElwee, 2016; Ribot & Peluso, 2003; Sikor & Lund, 2009). Other authors have devised related frameworks to examine state strategies of resource control, which have also been applied to conservation (de Jong and Ruiz 2012; Dressler 2005; Igoe 2007). Scott (1998) shows how statutory property relations, land-use designation, and other aspects of state administration serves to make landscape 'legible' to bureaucracy. Sowerwine (2004, 2011) refers to state representations of landscapes and land use as 'environmental imaginaries', which often conflict with how locals conceive of their environment. Examining the tools of state governmentality and biopolitics, other studies show how states use expert knowledge, statistics, and bureaucracy to establish a utilitarian management regime over their territory and, specifically, forest areas (Agrawal, 2005; Vandergeest & Peluso,

2006a, 2006b). Interestingly, MacLean (2013) reveals how Vietnam's central administration has partly failed to maintain bureaucratic power over provincial and local state actors, as it supplies data on agricultural land use, for instance, that is according to state plans, but not reality. The context of decentralization and devolution in Vietnam and elsewhere has furthered the need to deconstruct the state as the singular source of power and territorial control. Sikor et al. (2011) has also observed shifts in the Southeast Asian literature away from state territorialization to struggles over territoriality.

Recently, in the context of neoliberalism and globalization, as has been described in the literature, the deregulation associated with neoliberalism is actually re-regulation in its creation of new governing structures and discourses, and new territories (Castree 2008; McCarthy and Prudham 2004; Peck and Tickell 2002). What is novel is the diversity of actors, institutions, and spatial practices involved in dividing the land and water of the world (Fairhead et al. 2012). Programs such as payments for ecosystem services (PES), carbon offsetting, commercial tree plantation and many other market-oriented initiatives are creating new opportunities for both state and non-state actors to set up their new territorial strategies to control resources across the globe (Brockington & Duffy, 2010). Phelps et al. (2010) have argued that the monetization of forestry through carbon payments under REDD+ offers further motivations for the state to (re)claim control over forests. In the case of Vietnam, Suhardiman et al. (2013) and To & Dressler (2019) also considered whether or not the new Payment for Forest Ecosystem Services (PES) is a new tool of state territorialization when the government discourse on the 'success' of PES has served as an effective vehicle to deflect attention from the weakness of the forestry sector, to generate new funding for the sector's survival in the face of enduring budget shortages, and to expand state power in relation to forest resources.

At the same time, the establishment of public-private partnerships and the privatization of services, de-collectivization, decentralization, and devolution (Larson & Ribot, 2004) have underpinned the rising influence of private and non-profit/non-governmental interests on what were previously state domains. The particular role of NGOs and local villagers in this transition can be traced to the 1990s modified version of neoliberalism that emphasized civil society assistance in state policy formulation and implementation as well as the territorialization process (Corson 2011; Peluso 2017; Rasmussen and Lund 2018). Government is working with international organizations, environmental NGOs, financial institutions, and the private sectors to divide the country's forests into concessions for different purposes: carbon sequestration, biodiversity conservation, forest tree plantation, or watershed ecosystem services territory.

Moreover, Vandergeest & Unno (2012) also argue that global environmental interventions, with a strong push and lead from donors, can be seen as 'neo-colonial'. The emergence of the concept 'extraterritoriality' denotes how global environmental interventions can reinforce 'western' domination and create 'eco-empires' at various locales in the Global South. The state and international organizations have expended great effort to wrestle control over land managed by local villagers to build conservation projects (Bassett & Gautier, 2014; Corson, 2011). These coercive measures, combined with a divide and rule strategy, lead to land expropriation. These new spatial practices, concepts, and interventions can de/re-territorialize or establish new 'territories' into the long list of previously demarcated state-led conservation and development territories.

In the dissertation, I employ the concept of state territorialization as a lens to describe the contested process of 'making' a forest transition. The concept allows me to better examine the territorializing forest transition as a co-making process, between (i) the state territorial strategies to control forests and people and (ii) villagers' expressions of territoriality under state interventions. I especially pay attention to the villagers' role in the making of forest territory as their political reaction from below and the extent to which these territorial making interventions can influence their access to different resources and livelihood opportunities.

2.2.3 Political reaction from below

I draw on the work of Scott (1985) and Peluso (1992) about 'everyday resistance' and 'culture of resistance' to understand the various ways that local villagers use in responding to the state's culture of control. They have their own ideologies that justify their rights to resources. In the case of Malaysia, Scott observed that tensions were exacerbated by the introduction of double-cropping and combined harvesters, disrupting the traditional land-use and wealth distribution of the small population. He highlighted the ways in which powerless people can stall, break stuff, mislead, or use their social traditions to extract money and concessions from the powerful, play politics and even refuse to cooperate with dictates sent down from the Government. In Indonesia, Peluso notes that the local people encroach on the land and cultivate it (to resist state control over land); damage the trees or sabotage newly planted species (to resist state control over the trees); slow down or migrate to other places (to resist state control over labor); and ignore state policies or develop or maintain a culture of resistance (to resist state control over ideology). In the Vietnam Uplands, Sikor et al. (2011) observe that the Black Thai villagers ignore the forestland allocation polices and modify these to suit the local context. They resist these policies to increase their rights and reduce their duties attached to the land. Also in Vietnam, the local people in the northern Uplands

ignore the government's forest allocation policy and use the land continuously according to their own customary practices (Castella and Quang 2002; Sowerwine 2004). Consequently, these conflicts between the state and villagers over forest control and access, become a key characteristic reflecting complicated forest politics in Vietnam, and SEA broadly. It often results in deforestation, rural poverty, and social differentiation (Dressler and Turner 2008; Li 1999).

However, the recent work of many other authors, especially through the literature on land grabs and agrarian change (Borras and Franco 2013; Hall et al. 2015), have shown that the political reactions 'from below' to outsider interventions, such as state policies and interventions, have been vastly more varied and complex than is usually assumed. They argue that the reaction from below should be understood in a wider way, to refer to responses that extend far beyond 'resistance' in its many manifestations and range from mobilizations seeking to improve the compensation from people's expulsion from their land to demands to be inserted into land deals as forest protection workers or contract farmers to counter-mobilizations against land deal resisters. Beyond the local level, highly varied responses by societies and states at national levels and in international multilateral movements on environmental-social safeguards, for example, can strengthen the local villagers' agency and then influence their reactions in various ways.

Building on this idea in the dissertation, I also pay more attention to local villagers' agency and their behavior toward two main efforts that relate directly to FT in order to examine a more nuanced story of political reaction from below in the contemporary Vietnam: (i) tree plantations and (ii) forest protection under PES policy. The investigation is crucial, especially in the context of Vietnam's 30 years of transformation in which different villagers in different localities may have diverse forms of agency shaping social relations around land and forest resource access, and then exhibit diverse reactions (see Chapter #3, 4, 5, and 6).

2.2.4 Property relations and resource access

To better examine villagers' access to different resources and livelihood opportunities, as well as their expressions and reactions of territoriality in the context of state territorialization, I engage the literature on property relations and resource access.

The study of property relations has a long history in both political economy and anthropology, which have illustrated both material and symbolic dimensions of property. The idea that property and resource access are socially mediated goes back to the perspective that property relations reflect the interplay between individual and collective claims. Ribot & Peluso (2003) differentiate between property ("*the right to benefit from things*") and access ("*the ability to benefit from things*"). Under this scheme, some formal landholders cannot access or benefit from their property

but need to negotiate social or political institutions or have other assets to wield their property rights; conversely people without formal land rights may access resource benefits through other means. Ribot and Peluso's (2003) theory of access thus examines "*why some people or institutions benefit from resources, whether or not they have institutionally recognized rights to them*" (p. 154). The concept of access emphasizes all possible means people use to derive benefits from resources. This framework highlights two main mechanisms for benefit derivation: right-based access, which includes access defined by law, custom, and convention, and structural and relational access, which comprises a number of factors, such as market, technology, capital, power, and knowledge.

Based on the work of Ribot and Peluso, many other scholars also specify types of relations of access among those who control and those who seek to gain or maintain access – and through various ways such as cooperation, competition, conflict, and negotiation. For instance, Hall et al. (2011) build on the theory of access by showing how the 'power to exclude' is a key mechanism used to mediate the access of others.

Now, various ways have been discovered to link access and power over resources. Kashwan's work (2016) in India suggests that there is a need for examining and understanding the power asymmetries among actors and access control within institutional arenas. A careful analysis of institutional arrangement thus is even more important in the context of legal pluralism,[5] when the actors play various roles in different institutions and seek to gain access to the same resource. This is often the case after land reforms, when customary property relations prevail alongside imposed statutory tenure regimes, as is the case with forestland in particular in rural Vietnam (Sikor and Lund 2009; To 2007). Explaining this dynamic in Vietnam and beyond, Sikor & Lund (2009) argue that people's claims and practices based on customary property relations reify the social legal legitimacy of the institutions or traditions underlying these property relations. Access to natural resources is thus tied to the power and authority of certain institutions and the actors to legitimize the property relations they stand for (ibid.). This builds on Berry's (1989a) idea that property relations only exist with and are shaped by people's engagement within institutional arenas and thus emerge from regularized practices and evolve over time (Leach et al., 1999).

Employing the new view of access throughout my result chapters, I examine different mechanisms that local villagers have applied to gain, control, and maintain access to land in order to expand their smallholder acacia plantations. I see the salience of Sikor and Lund (2009)'s argument that

[5] The term legal pluralism is commonly used by social scientists to describe a situation of competing sets of regulation, such as informal property relations prevailing amidst their official replacement with statutory land tenure.

access is subject to villagers legitimizing certain social institutions, which illustrates what Moore (1993) calls the 'micro-politics' of property and access. In addition, the relationship between access control and maintenance also provides a new way of analyzing multi-social hierarchies (Milgroom & Ribot, 2020). I argue that to acquire land for acacia, villagers are navigating and making creative, resourceful use of multiple formal and informal relations, and traditional and regulatory institutions, all in an evolving historical context. As regulatory, political, and socio-economic conditions evolve, the villagers stay acutely aware of the nuances of their access rights and what powers, discourses, technology, and capital they could mobilize to produce "new" access opportunities (Peluso & Ribot, 2020; Ribot & Peluso, 2003; Sikor & Lund, 2009). The strategies and mechanisms I describe can be labelled as 'bricolage*'* in that the ways in which villagers get access to land for growing acacias are "*borrowed or constructed from existing institutions, styles of thinking and sanctioned relationships*" (Cleaver 2002:16). Through a process of 'tenurial bricolage' (Cleaver 2000; Dressler et al. 2012), villagers have taken advantage of the points of convergence between the state and the local tenure institutions to produce their own new access opportunities and new mechanisms to secure land for acacia (see Chapter #5).

2.2.5 Environmentality: Environmental subjects and identity

I found Agrawal's (2005) environmentality framework useful to study the effects of successive forest policies and interventions and shifts in villagers' attitude toward forests.

Agrawal (2005) studied how state-led forest conservation in India was decentralized, infiltrated village communities, and sought to enlist villagers in so-called forest councils for joint forest patrolling. He examines how some villagers became 'environmental subjects' as they participated in the forest councils and adopted conservation attitudes, behaviors, and identities in support of forest conservation. He further examines how this affected community dynamics and village politics. His study has three analytical foci, which I adopt: the institutionalization of conservation, the ensuing village politics, and environmental subject formation. However, he neither considers their livelihoods nor the socio-cultural context or idiosyncratic factors that seem integral to shaping both individual subjectivities and village politics surrounding forest conservation (Acciaioli 2008a; Cepek 2011; Singh 2013).

Like Agrawal (2005), my study seeks to elucidate how FT-related policies and interventions are institutionalized at a local level and how this affects village politics and villagers' agency. I use his concepts of environmentality and environmental subjects, as I find that they effectively capture the goal of FT's policies and interventions, both in tree plantation and protection, which is to foster forest management awareness and behavior. I find that my ethnography approach is also

well suited for a study of environmentality and usefully advances Agrawal's empirical approach. I ground my environmentality study in the understanding of the Upland people forest-based livelihoods and the shifting importance of forest use. I aim to investigate whether and how local villagers have become environmental subjects supporting reforestation and some of them support forest protection.

The benefit of using Agrawal's environmentality framework for my study is that its attention to village politics and subject formation opens up the analysis to both the intended and unintended long-term effects of successive forest interventions on local identity and sense of belonging in the changing landscape.

In addition, I also integrate the notion of 'fantasies of identity' into the 'environmental subject' framework. This is understood as 'ideals about the kind of person one would like to be and the sort of person one would like to be seen to be by others' (Moore 1994: 66). According to Jones (2011), the forest, people and their forest-based activities are presences that articulate practice, memories of the place, and history, which together signify forms of identity and a sense of belonging for people. The 'fantasies of identity' thus helps me to discover the implications of these changes on their subjectivities, by examining how these villagers repositioned themselves in wider matrices of values. My approach takes a particular interest in the interactions between the state strategies, the villagers' livelihood strategies, and their ideas about their own personhood and identity.

The environmentality framework thus fruitfully interacts with the notion of 'fantasies of identity' and all other aspects of the conceptual framework for this thesis to form the new livelihood structures and the new identity of forest people (see Chapter #6).

2.3 Conceptualizing the research questions

Based on the theoretical foundations described above, in this section I further refine my research questions and link them to the analytical frameworks adopted in my four paper-based chapters. Each of these chapters represents a deeper engagement with the three research questions. In the first paper (Chapter #3) I adopt the concept of 'territorialization' (Peluso & Vandergeest, 2020; Rasmussen & Lund, 2018; Vandergeest, 1996; Vandergeest & Peluso, 1995) as a sharp knife to cut the simple forest cover curve into layered polygons of 'dynamic spaces and political ecologies' (Peluso & Vandergeest, 2020: 1083). This allows me to highlight competing interests, strategies, visions, and power relations to explore the way 'new forests' were produced, and FTs are shaped across scales and by different actors. Three main relevant issues were discovered through this process, which led to the second, third, and fourth papers (Chapter #4,5,6):

(i) Institutional arrangement in forest and ecosystem services governance through the lens of collective action and common-pool resource management (Barnaud et al. 2018; Ostrom 1990)

(ii) New frontier of land control (Peluso and Lund 2011) in the context of smallholder tree plantations through the lens of the access framework of Ribot and Peluso (2003; 2020), crop booms, and land acquisitions (Hall 2011; Hall et al. 2011)

(iii) Local forest-related livelihood transition and identities through environmentality and the notion of 'fantasies of identity' (Agrawal, 2005; Moore, 1994).

A detailed explanation of how these issues is applied to the research objectives follows.

2.3.1 RQ1 - Territorializing FT in A Luoi, Upland Central Vietnam

Since I am interested in investigating the making of FT through the lens of political ecology, I pose the question: *How has the forest transition shaped locally managed forest landscape in practice, particularly under the implementation of successive state forest-related policies and interventions?* In other words, I examine to what extent the power and agency of different actors, especially the state and local villagers in Vietnam shape the changes in forest landscape and their governance at the local level (Vandergeest and Roth 2016). Starting with the big crisis when forest resources in Vietnam have been substantially degraded during the last several decades, one of the main overarching reasons for forest loss is that the state failed to protect the country's forest (Sowerwine 2004; Dang et al. 2012). At the same time, the termination of support and development aid from the former Soviet Union severely impeded economic development in Vietnam. To remedy this, the government decided to shift from a centrally-planned economy to a market-oriented one – the so called Đổi mới (renovation) program introduced at the end of the 1980s. Doi Moi also brought about profound changes in the way the state classified, used, and managed the forest.

By reviewing the policies and interventions of the last three decades after Đổi mới, I argue that the state-policy FT pathway territorializes forestland in the sense theorized by Vandergeest and Peluso (1995). The policies emphasize state management of forest and forestland, which encompass a wide range of activities, such as surveying, classifying, boundary demarcating, mapping, land-use planning, issuing policies on forestland use and management, implementing policies, allocating forestland, contracting, and withdrawing forestland, registering forestland, inventorying forestland, issuing forestland use certificates, and resolving conflicts. This implies the state's attempt to control the local people and landscape by drawing boundaries in the forest and specifying activities that are allowed or not allowed within these boundaries. In addition, the

successive state policies and interventions aim to confine people to certain portions of land with rigid boundaries on the fields as well as on the map by registering them in the land recording books. This led to an increased presence of the state at the local level, and also shows the hidden agenda of the state to "*use environmental or ecological reasons as justification for what is really a concern with social planning*" (McElwee, 2016: 5). Transformation through territorialization is the notion that I name for this process.

Further, as I am interested in exploring the type of changes and underlying mechanisms, I pose the question: *How have these forest territorial change dynamics manifested at the local level and why?* I employ the idea of territorialization of Rasmussen & Lund (2018) as "*strategy of using bounded spaces for particular outcomes, a resource control strategy that involves the classification of particular areas in order to regulate people and resources*" (p.388). Going beyond the state-centric focus, this territorialization notion allows me look further into the new forest territories that are emerging as the outcomes of the state FT through territorialization with two examples: the Payment for Forest Ecosystem Services (PES) forest territory, which is reflects new state strategies for natural forests and forest protection activities, and the smallholder acacia plantation territory, which is a result of the 'from below' territorialization strategy led by local villagers through tree plantation activities. In each case, I focus on understanding agency and the parameters of action within which actors pursue their forest-related routines and practices as the responses to the changes they face. Then I explore how they are consciously and unconsciously involved in shaping and/or (re)shaping forest territories in practice. The process may involve many actors, ranging from central government to local authorities who are in charge of forest management and local villagers using forest resources. It may also involve local people in the same villages, from other villages nearby, or between them and outsiders. But in the limitation of the dissertation, I will focus mostly on two actors, the State (through policies and interventions) and local villagers.

According to previous political ecology literature on Southeast Asia, successive government interventions in forests have often failed when faced with local resistance and conflicts (Li, 2007; McElwee, 2016; Vandergeest & Roth, 2016). However, recently other scholars have shown that interventions such as forestland allocation and tree plantation have facilitated the expansion of forest cover and improved local livelihoods, as I observed in A Luoi (see more examples in Meyfroidt and Lambin (2008), Meyfroidt and Lambin (2009), and Cochard et al. (2020)). These findings suggest that a more nuanced story about the result of state interventions can be found, that can go beyond the resistance but acquiescence or incorporation, or different form of 'co-production' (Gururani & Vandergeest, 2014).

I develop three main arguments. *First*, the politics of territory-making in practice has always been marked by struggles over different benefits, power distributions, and notions and visions among actors. These tensions can lead actors to (re)negotiate and devise new territorial strategies to deal with these tensions. I, thus, employ the idea to understand the configuration and reconfiguration of forest spaces that lead to a transition in practice.

Going underneath the linear forest cover trend, forest transition can be understood as a 'landscape of forest space production', that includes full of territorial activities by different actors. The forest transition curve thus is shorthand of all the dynamics that shape and re-order forest spaces anew over time (cf. Rasmussen & Lund, 2018).

Second, the extent to which state territorial strategies can prescribe activities within deliberated spatial boundaries depends on how local actors react, negotiate, and capture aspects of these strategies and insert their own motives and desires in practice. The territorial making process, thus, is not just top down, but rather spins to local villagers from below. These actors and their interactions radically dissolve or alter existing institutional arrangements, benefit-sharing mechanisms, and then create new resource control mechanism, new enclosures, and new territories. I argue it is a form of 'co-production'. The changes in landscape over time and the landscape that we see today are the results of this co-constitution process. The different layers may start at different times during history, with different interests, will, desires, or structural and institutional arrangements. But their legacies and the components may persist in the next layer. They all alter, blend, or intersect with each other and manifest the overall shape of 'landscape forest space production', or FT in practice. To illustrate the argument, in this question, we pay particular attention to the interaction between state-villagers and their changing power over time, especially through two new neoliberal initiatives: PES and smallholder tree plantation.

Third, using territorialization to understand FT also allows me to look at the conflicts and tensions in the territorial making is not just a control – resistance form between state and local villagers, but more the progress for better changes. When new tensions occur, another round of territorial strategies is designed and implemented to change or (re)negotiate benefit distribution, burdens, and risks. I agree that new territorial interventions are often built on past or existing ones as part of path dependence. This goes beyond the critical argument about the successive failure of state interventions (cf. Li, 2007), the idea of path dependence (North, 1990) in that this implies also can imply that the new can also correct the past to gain better outcomes. I thus argue, the making of FT thus can be understood as assemblages of continuous 'push-and-pull' moments over time to facilitate forest changes. Analyzing the trajectory of successive state policies/interventions and

local political reactions along a forest transition over the last three decades in Vietnam helps me prove this argument.

2.3.2 RQ2 - Forest transition in practice and its long-term impacts on institutional arrangements, forest governance, and land dynamics

Building upon the understanding about the shape of transition in the upland forest spaces, the study asks another question: *To what extent have forest governance and land dynamics changed under the forest transition process?* Furthermore, asking this question also allows me to address two knowledge gaps related to FT. First, FT occurred in Vietnam during the execution of several large-scale rehabilitation campaigns, which marked Vietnam's forestry transition from a system dominated by the state to a system involving different actors, especially local villagers. There is still minimal understanding of how these changes have impacted on actor's roles, participation, and 'ability to get benefits from things' during the FT process over the past three decades.

Second, it cannot be denied that forest plantations play a very important role in efforts to increase forest cover during the FT process. But there is not much research about the protection or conservation efforts, their changing governance, and how they contribute to the forest cover changes, particularly in light of the more recent PES policies that economically incentivize better protection of natural forests (McElwee, 2012). Therefore, it is crucial to look at the effectiveness and contribution to the FT-making process in practice.

These concerns have been formed into two sub-questions in the thesis that target two different halves of the FT-making process: (i) Expansion of forest cover through tree plantations and (ii) Maintaining natural forest areas through forest protection efforts, especially the PES mechanism. Reversing the analysis from the first research question, tracing the successive state interventions from above, in this question, I apply a "bottom-up" approach. Accordingly, the involvement of local villagers and their politics (agency and behaviors) are the main focus of the analysis. Comparing these two can help show the different positions, agency, and behaviors of local villagers toward two different types of forests (natural and plantation) and activities (conservation and commercial). Consequently, it forms the main argument of the FT-making process in Vietnam: the bifurcation of forest transition (see Chapter #3).

First, to what extent have forest protection efforts – especially PES policy – transformed local forest governance and its effectiveness?

I highlight the emergence of PES forest territories on the ground (see also Chapter #3). I provide a counterargument to the assertion that PES policy is new state territorialization strategy, for

maintaining the control of the state over forests, as Suhardiman et al. (2013) and To and Dressler (2019) argued. Rather, I argue that it shows the efforts to continue the shift or devolution process, from state-dominant natural forest management to shared responsibilities and benefits among stakeholders. Therefore, I examine how PES policies have impacted local people's participation in forest protection and their impacts. Community-based forest management models have been widely recognized as a means of improving local villagers' involvement in forest management (CFM) and thus were chosen as a case in my research. However, I focus not on the traditional CFM models, but situate them into the new context of PES implementation. Collective PES is what I called this new arrangement. I pay attention to different models and examine to what extent PES has changed the institutional setting, land tenure, and access to forests among the communities. To answer the question, I employ an analytical framework cross-fertilized between collective PES literature and common-pool resource management and collective action theory (Barnaud et al. 2018; Hayes et al. 2019; Kerr, Vardhan and Jindal 2014; Kolinjivadi et al. 2019; Murtinho and Hayes 2017; Ostrom 1990) (see Chapter #4).

In addition, I also paid great attention into PES and its implications on forest governance. I argue that even a significant shift in forest management, from state forest management to shared responsibilities among stakeholders, such as state forest owners vs. local villagers (see Chapter #3) or among local villagers themselves (see Chapter #4), need to be balanced with shifts in accompanying rules, regulations, institutional capacity, as well as actors' constellations and resource allocations to fully implement new initiatives like PES. This incomplete or partial institutionalization under PES recently determined local participation in forest protection which then has shaped its rather poor effectiveness, not only in terms of protecting forests but also local social and livelihood development. In the research, I also link the PES topic with a review of the literature on 'environmentality' (Agrawal, 2005) to examine the anthropological outcomes of successive state policies and interventions on forest protection and also PES in two communes in A Luoi (see Chapter #6).

I especially pay attention to local institutional setting and governance in practice, as well as the position and perspectives/supports of local villagers in PES implementation. I thus examine how and why PES policies and their accompanying regulations and benefits unfold in the community setting (see Chapter #4); how PES is received by local villagers in terms of distributive justice, both in responsibilities and benefits (see Chapter #3 and Chapter #4); and the role of PES in recipients' livelihoods (see Chapter #6). I also seek to examine these aspects as background for my analysis of behaviors toward forest protection, environmental subjects, and identity (see Chapter #6).

If there can be justice in PES governance, then on whose terms? Most authors seem to imply that equitable payments are "most just", but this may not always be feasible or logical, and understandings of distributive justice vary significantly. As Sikor (2013) highlights, PES governance may be fair or just in terms of either equality, need, merit, or deservedness. In light of this, I address the question whether, for instance, local villagers with differing opportunity costs or economic levels will perceive PES in the same way. I further consider the justice of PES governance among the PES recipients in the same watershed landscape through the perspective of different forest owners (villagers vs. state forest owners). Then, I examine the outcomes due to this differentiation. This justice in PES governance has been examined not only in the case of A Luoi, my main research site, but also at the broader national level (see the paper I co-authored in Annex 2 - McElwee et al. (2020)) and at different local settings across Vietnam (see Chapter #4). The examination that I provide here has not yet been seen in the PES literature.

Moreover, a key aspect related to PES governance and efficacy is that recipients need to trust that they will receive sufficient remuneration to continue to invest their labor into forest protection or land-use change. While Neef and Thomas (2009) mention the aspect of trust, it remains under-examined both empirically and theoretically in the PES literature, in part because it is a complex, subjective variable to investigate. I find that the villagers' attitude and compliance toward forest protection, which I examine in terms of environmentality, can be undermined by a lack of trust in local PES governance, such as suspicions about the embezzlement of PES money or unfair distribution of responsibilities. To understand how PES is implemented in practice, both in terms of forest governance and local people's agency and behaviors, I therefore have to examine not only PES policy, but also local implementation and how local villagers conceive of state policies and interventions, governance, and justice. While few PES studies address these aspects empirically, my thesis goes beyond the argument that the successive implementation of forest-related policies, including PES, have shaped their environmentality, even beyond the policy objectives (see Chapter #4 and Chapter #6).

Second, to what extent have large-scale reforestation and afforestation efforts transformed local land access and development?

Similar to other countries undergoing an FT-making process, Vietnam has embarked on several ambitious large-scale tree plantation campaigns. Much of the work is being carried out by individual households, especially in Upland regions across the country. Access to productive resources, such as land, thus is a prerequisite to achieve both what the government deliberates but also the participation of local villagers in tree plantation activities. Forest devolution policies,

including forestland allocation programs, were implemented in the early 1990s and transferred management power over large areas of forestland previously controlled by the state to local households. They believed that implementing devolution policies would improve local livelihoods for the Upland poor and stabilize forest conditions to increase forest cover. The state-led policy path, consequently, also set the pattern of forest expansion in settings where local villagers found sufficient value in tree plantations and then expanded their investment (both financial and labor) to plant trees around their homes and villages. This practice generates a smallholder, tree-based land use intensification pathway of the FT (Lambin & Meyfroidt, 2010). Vietnam, thus, is a particularly useful case study for other countries seeking to use villagers in their own reforestation and restoration interventions.

Yet, there have been few assessments of these tree-planting efforts in Vietnam, how they have transformed the local conjuncture of power and land-based resource control, and their long-term impacts on social development. My research thus will examine this knowledge gap. The notion of 'access' developed by Ribot and Peluso (2003) provides a useful lens for my investigation. Applying their framework, I can examine: (i) how villagers' ability to benefit from resources is not only based on formal rights (property and tenure claims) but also on a larger array of institutions and political-social-economic relations and (ii) specific types of strategies, mechanisms, and relations of access among those who control and those who seek to gain or maintain access – through co-operation, competition, conflict, and negotiation (Peluso & Ribot, 2020). The analytical framework also allows me to engage in several ongoing theoretical debates: (i) local smallholders and their agency in land control; (ii) social changes and agrarian transformation in the context of crop boom, and (iii) sustainable land governance to achieve better FT outcomes in practice (see Chapter #5).

The increase of smallholders in forest commodity plantation booms has led to new land dynamics. I therefore pay attention to local smallholders and their agency in this land control process. The issue is contextualized in the anomalous context of a commodity plantation boom in which villagers are proactively getting involved, driven not only by market forces but also by state interventions toward increasing forest cover (Borras and Franco 2013; Hall et al. 2015; Meyfroidt and Lambin 2008a; Meyfroidt and Lambin 2008b; Xu 2019). Rather than relying on the stereotypical frame of local villagers as victims in land acquisition, my paper attempts to identify the mechanisms through which villagers have actively sought access to land that directly led to an expansion and deepening of commercial acacia plantations. To acquire land for acacia, as regulatory, political, and socio-economic conditions evolve, the villagers stay acutely aware of the nuances of their access rights and what powers, discourses, technology, and capital they can

mobilize to produce 'new' access opportunities (Peluso and Ribot 2020; Ribot and Peluso 2003; Sikor and Lund 2009). The strategies and mechanisms we describe can be labelled as 'land acquisitions through bricolage', in that the ways in which villagers get access to land for growing acacias are "*borrowed or constructed from existing institutions, styles of thinking and sanctioned relationship*s" (Cleaver 2002:16). Through a process of 'tenurial bricolage' (Cleaver 2000; Dressler et al. 2012), villagers have taken advantage of the points of convergence between the state and the local tenure institutions to produce their own new access opportunities and new mechanisms to secure land for acacia (see Chapter #5). Further, the new dynamic has also facilitated the process of new territorial strategies by villagers within the state-planned territories for plantation, radically dissolving or altering existing institutional arrangements and then creating new resource control mechanisms, new enclosures, and new territories – also called 'smallholder tree plantation territories' (see Chapter #3).

These new dynamics, I argue, also reflect the transformations of rural agrarian lives and livelihoods. De-collectivization, land allocation, privatization under devolution, neoliberal economic restructuring, and market forces have presented challenges and opportunities to rural villages (Tai and Sidel 2013). The mechanisms for land acquisition in a crop boom that I document here suggest that villagers are making numerous 'rational', economically based, household-based decisions at the same time as they continue to value many aspects of their 'moral economy' as reflected in local social relations (such as labor reciprocity, traditional access institutions, or collective efforts at reclaim state forest lands). It seems that Scott's (1976) characterization of the peasant economy as being highly normative and risk-averse is not necessarily borne out by current dynamics. One of the clear results is villagers are restructuring their local livelihoods as well as their desire, motivation, and attitude toward forest resources, especially on the ground (see Chapter #6).

2.3.3 RQ3 – Forest transition in practice and its long-term impacts on local forest-based livelihoods and identity

My first two research questions address several new aspects of the political ecology of the forest and agrarian transformation in Vietnam Uplands. This understanding of local forest dynamic changes also grounds my analysis of local forest-based livelihoods in my third research question: *How do the local villagers deal with changing landscapes to live and what are long-term impacts on local livelihood's structure and local identity?* Following the dissertation's logic, after analyzing different villagers' reactions to the successive state policies and interventions in both

forest protection and tree plantations (see Chapter #3, 4, and 5), I then further detail the transition of local forest-based livelihoods over the last three decades and explore the impacts on social changes and development, which include new patterns of social differentiation, livelihood vulnerability, and local identity.

To do so, I employ political ecology of livelihoods approach where I incorporate the question of scales, power within local institutions, formal institutions, and the mediating influence of identity into the making of local livelihood structure. The structure of livelihoods, I argue, is not only simply micro-level. They are extra-local processes where negotiation around access to livelihood assets and the finely tuned strategies of various actors happen, tie into, or are influenced by external and internal interventions, such as laws, policies, institutions, culture, or power factors (Carr, 2015; Scoones, 1998, 2009).

The local people in A Luoi I talked with have forest livelihoods radically different from three decades ago. They are enrolled in a highly market-oriented production of commodities like acacia. They are hungry for land to expand these activities (see Chapters #3 and #5). At the same time, people are still active in collecting other natural forest products for market sale (e.g., rattan, bushmeat, and honey). Community-based Forest Patrol teams under PES have also complicated the village politics of forest conservation. Although the so-called community protection team informally allows villagers to access the natural forest for subsistence purposes, most importantly for rattan cultivation, it has become the subject of many conflicts in A Luoi (see Chapter #6). Going further in detail in Chapter 6, I analyze how the local villagers and their active engagement in both tree plantations and forest protection have affected their practices and discourses towards forests.

As Bebbington (2000) argued, "*People encounter development from their mundane, daily concerns to build and improve their livelihoods, to build places they enjoy being in, to give meaning to their lives through these livelihoods and places, and to maintain, and, as far, as possible, to extend the degree to which they can exercise control over their conditions of existence*" (p. 513). The value of my livelihood research thus also shows how forests are viewed, produced, and protected by local villagers. It also leads me to go further with local identity and the formation of new forest people. My argument is based on what Robbins (2012) has characterized as a main thesis of environmental subjects and identity. Institutionalized and power-laden forest management regimes have led to kinds of people, with their own emerging self-definitions, understanding of the world, and ecological ideologies and behaviors. People's beliefs

and attitudes do not lead to new environmental actors, behaviors, or rules systems; instead, new environmental actions, behaviors, or rules systems lead to new kinds of people.

At the heart of the argument, is Agrawal's (2005) concept of environmentality, which demonstrates that the rise of this system of self-governance was accompanied by (or more accurately, resulted in) a transformation of people's attitudes about the forest and themselves. The forests have become a value in their own right for the people, and they have become the kind of people that depend on their connection to forests. In Agrawal's terminology, they have become environmental subjects: "*those for whom the environment constitutes a critical domain of thought and action*" (p.17). Similarly, according to Jones (2011), the nature of forests, the material (economic) qualities of their timber (planted forests), or ecosystem services or NTFPs (nature forests), the sensory 'data' they give off (appearance, sound, smell), their roles in ecological and biosphere processes, their changes - all contributes to the way forest become cultural symbol and become entangled in the construction of identity of forest-people. Additionally, the notion of 'fantasies of identity' by Moore (1994) as "*ideals about the kind of person one would like to be and the sort of person one would like to be seen to be by others*" (p.66) allows me to examine how villagers position themselves in the broader matrix of changes. In one dramatic changing landscape, over three decades in A Luoi, I assume that new identities and new forest people in Upland Vietnamese have been emerging.

In sum, the empirical background, the review of academic studies and research question are useful for situating my research on the social and political dimensions of FT in Vietnam within the broader FT knowledge gaps. Taking a different approach, my research thus aims to go beyond the existing useful and interesting literature on the FT in Vietnam and in generally to look at the process in greater depth. I am not just drawing on general quantitative statistics, but exploring the historical, political, and social dynamics hidden inside this environmental phenomenon in a specific, localized context. Instead of focusing on macro socio-political variables within the FT literature, in the thesis, I explore the macro forces, such as global trends of forest governance, expansion of market forces, and national forest policies and interventions all the way down to their local reverberations in forest practices for both forest plantations and protection activities. My work in A Luoi not only represents a case study of how state strategies have shaped the FT in a locally managed forest landscape, but also reveals new generalizable insights of how local conditions, relations, and factors shape FTs. Transitions in forest use have been driven by both national policies and local conditions, I argue, implemented by different actors at different spatial scales. The research questions, therefore, shed light on the influence of the state "from above" but

also reflect the political reactions "from below", back and forth, throughout the FT-making process.

2.3.4 The research conceptual framework

To bring these three research questions together, and to unify this article-based dissertation, I developed a comprehensive conceptual framework to offer a thorough account of **the making of FT** in modernized tropics, especially Vietnam (see Figure 5 below). The framework uses a Political Ecology approach to debunk myths about the forest transition and to investigate what happens 'beneath the smooth curve' of a forest transition while highlighting the diverse social dynamics that underpin these processes.

Rather than taking a macro view of FT dynamics and looking at 'quantitative' growth of forest cover as the primary metric by which one ought to understand FT, the new framework looks under the forest transition curve at its 'making'. It examines how local and state actors conceptualize their relationships to different types of forests, how institutions shape these relationships, and the multi-dimensionality of FT in practice.

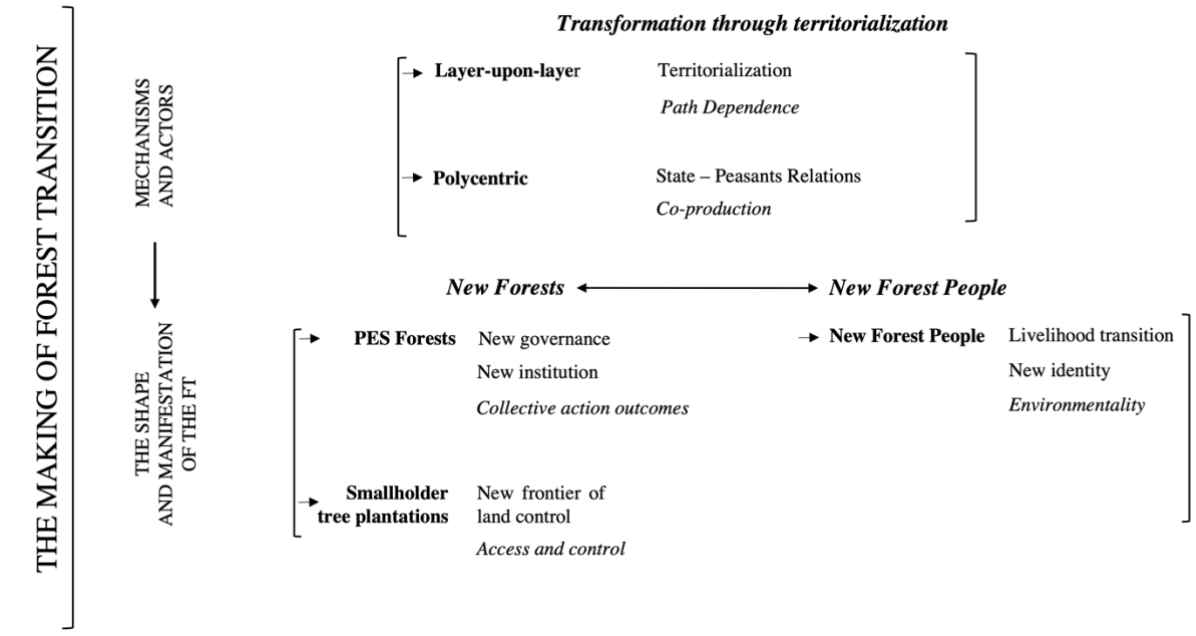


Figure 5 - The making of a forest transition: a conceptual framework

Let me explain the comprehensive analytical framework as presented in Figure 5. It addresses the 'making' of the forest transition, as indicated on the far left. Next on the left we see that my analytical focus in split in two: on **mechanisms and actors**, and on the s**hape and manifestation (or outcomes) of the FT**.

The way in which I focus on mechanisms and actors is summarized in my notion of '**transformation through territorialization'**, as shown on the top of the figure. This part of the analytical framework first attention on path dependent **layering of state-led policies** and interventions, particularly the efforts to maintain and increase forest cover; and how these have been adopted or contested by local people over the last three decades. Using the lens of **territorialization**, a comprehensive of history of successive forest policies that have pursued by the government and their embeddedness into locality is illustrated. I especially pay attention to the reforms that are shifting forest management from monocentric state-central planning to **polycentric** shared governance and empowerment of non-state actors, especially local villagers. The processes include decentralization and devolution in land tenure, engagement of villagers in both forest management (community-based) and tree plantations; control and access as driven by state, market, and local actors; and its implications for socioeconomics as local livelihoods and people's identities on the ground. As a result, the shifting spatial forest dynamics and processes can be seen as '**co-produced'** by the state and villagers.

The bottom right corner of Figure 5 then gives attention to some of the specific on-going outcomes of this 'transformation through territorialization'. These are transformative trends like the implementation of Payment for Ecosystem Services (PES), the smallholder acacia boom, and the emergence of new forest people.

First, **Payment for Ecosystem Services (PES)** in Vietnam is a state-led program designed to make individuals and communities engage in sustainable forest management. PES arrangement at the beginning has been 'piggybacked' onto the existing common-pool forest management system. But vice versa, the emergence of new PES-related actors, rules, and regulations also have influenced forest governance practices. I (with my co-authors), thus, developed an innovative crossing of research on PES and on **collective action** in common-pool resources to explore how collective action problems in forest governance are addressed by the state-led PES policy and how problems in community-based PES have arisen as a result of contestations over land, historical trajectories and the process of institutional crafting. **New community-based forest governance modes with new institutional arrangements** have boomed as a supposedly more efficient and effective means to improve forest conservation and development on the ground. But I also show that PES may introduce new conflicts and competitions over land, and thereby alter community characteristic as well.

Second, another set of specific territorialization processes and outcomes is the attempt by villagers to acquire land to join in the a**cacia-forestry commodity boom**. This reflects contemporary

peasant strategies and various types of 'reaction from below' to Vietnam's changing forest governance over time. Framed as both a process of **frontier dynamics** as spaces are claimed for afforestation, as well as an examination of smallholder agency, I examined the mechanisms by which villagers combine traditional land tenure institutions (usufruct and kinship-based rights, for instance) with state-based rules and opportunities, in a process called 'bricolage', in order to expand their tree farms. The land dynamics have been leading to a patchwork of 'grey' zones of understanding of **land control and access**.

Third, in the final component of the analytical framework, I focus on forest people to address the question of how identities and livelihoods change in concert with the FT. It is not just forests or forest- related institutions that are transitioning, but also **people**. The framework thus allows me to examine how environmental subjectivities have evolved and new subjectivities emerged in response to the intersecting and varying policies, territorializations and social relations. People have transformed from seeing themselves as swidden agriculturalists to seeing themselves as **new forest people,** as smallholder tree plantation managers and forest protectors.

The framework in Figure 5 thus illustrates a whole 'landscape' of forest transition making. In this comprehensive picture, it allows us not only to (i) discover how the FT unfolds within the network of actors, their power relationships as well as the mechanisms they apply to gain control and access over the forests and foster forest changes; but also (ii) how the FT manifest in practices with the significant transformation in forest spaces, state-villager relations, in governance modes and institutions as well as villagers' subjectivities and attitudes towards forests as well as their perceptions about themselves and forest landscape that they have been lived in. Overall, this analytical framework helps me to tell the story of how Vietnamese upland forest changes over time, the complex processes taking place underneath the forest canopy as well as its long-term implications. In term of the FT, while researchers have proposed several different constellations of driving forces and actors behind forest transitions – such as a state forestry policy pathway driven by perceived scarcity or crisis, or a smallholder tree-based land use intensification pathway driven by livelihoods, the framework allows me to pay more attention to the types of detailed, fine-grained processes of land access underlying these pathways.

2.4 Data collection and analysis

2.4.1 Data collection

The research combined different data collection methods, including a document analysis, semi-structured interviews, a survey and observation. This combination was applied in order to generate data from different sources for triangulation (Tellis, 1997). In addition, the ethnographic approach

enabled me to pay close attention and detail in the case study of A Luoi to depict the complexity of the real situation. Staying in the village while collecting data for a substantial period of time made it easier for me to understand the process and dynamics occurring in the area. The data obtained from the field enabled me to understand how different actors' perspectives and visions of the forests and forest change and how they were able to benefit, and their local power relations surrounding forest-based activities, such as tree plantations and forest protection.

During the three years and a half, I revisited the place several times because it is very hard to glean all the information from one visit whether it based on surveys or also ethnographic research. But the main fieldwork was conducted from January – June, 2019. Before the fieldwork, a case study protocol was formulated. Within A Luoi district, my main research sites were two communes A Roang and Huong Nguyen, which were selected based on the preliminary visits in September 2017 and September 2018 and secondary data online, showing distinct dynamics of forest transformation. The protocol included the research objectives, an overview of key issues in the case study, guiding questions for semi-structured interviews, the questionnaire and the field procedures (i.e. when the various activities and interviews would take place).

Since the thesis was built on 3 research questions and formed different articles, the data collection method was also developed separately to suit the objectives of each section (see more detailed in each paper-based chapter). But in general, the research began with literature review to get an overview of Vietnamese forest policies over time. The relevant literature and documents included forest laws, land laws, national forest programs, national forestry action plans, national forestry development strategies, official documents, related governmental guiding documents, national reports, provincial reports, and books, concerning politics of forests in Vietnam.

I applied semi-structured interviews to generate in-depth information from the involved actors. According to Tellis (1997), this type of interview is one of the most important sources of information in the case study approach. The method allows more open and flexible interaction between researcher and respondents and allows them to express their ideas and opinions. It, therefore, is particularly useful to explore actors' personal experiences, attitudes, and viewpoints regarding the topic under inquiry, including the sensitive issues and to elaborate information and clarify answers (Aira et al., 2003). Fieldwork includes interviewing one hundred (100) key informants recruited by snowball sampling (see Table 1). These informants comprised actors from the forestry and land management sectors, research institutes, local authorities, and local NGOs, as well as forest rangers, forest protection contractors and forest owners/villagers. Each of the informants provided rich set of ethnographic and historical narrative descriptions about how the

forest-related policies and interventions have been implemented, how the local institutional setting for these interventions as well as the evaluation of outcomes in practice. Through these interviews, I was able to ascertain if the local actors related to forest use and management changed their perceptions, their power, function or position in their social relations; if the rules, norms, principles changed over time, or to what extent each institution layer are built upon or conflicts each other.

Besides semi-structured interviews, a survey was carried out to capture an overview of local villagers about forest changes and their perceptions related to different forest-based activities as tree plantations and forest protection. Using surveys to collect data become more popular in social sciences (Weisberg et al., 1996) because surveys gather basic information about the target group and help to understand their behaviors, opinions, and preferences. They are particularly helpful in discovering relationships that are common across population, thus providing generalization about the object of study. In addition, this approach is widely acknowledged as a useful research tool to evaluate public policy. In total, the survey involved 194 respondents chosen by stratified random sampling from the economic household status lists of local authorities from eight villages in the two communes Huong Nguyen and A Roang, A Luoi districts. The questions were formulated before the fieldwork. They addressed descriptive information on gender, age, education, marriage status and ethnic background of the head of the household, as well as the size, the number of laborers in the household, the main livelihoods, the economic status of the household. Later questions focused on the respondents' perspectives on forest and landscape changes surrounding the villages, forest-related interventions of tree plantation and forest protection, the involvement in each activity, the contribution to household income, their evaluation of the policy and their suggestions. Before the survey, a pre-test of the questionnaire was done to adjust the questions, making them clearer and understandable to respondents. And the questionnaire was followed up with open-ended question about the reason for the interviewee's opinion on forest landscape and their forest-based livelihoods in the future.

The history of the village, total population size, number of men, women, percentage of poor, main sources of village income, history of natural disasters and landmark of policies/projects with socio-economic investment, the history of villages that were collected from the secondary data, governmental reports, participatory mapping, focus group discussions with local people or key informant interviews.

Table 1 - Overview of key informant interviews

Key informants	Numbers

Policy makers	8
Experts and researchers	5
Provincial governments	8
District governments	3
Forest rangers/professional protection staff	4
Local authorities	5
Village headers and elders	16
NGOs	9
Forest owners	
• Sao La Nature Reserves	4
• A Luoi Protection Management Board	4
• Nam Hoa State Forest Enterprise	4
Head of community forest protection team	10
Villagers	20
Total	100

Table 2 - Overview of household surveys

(Source: Huong Nguyen and A Roang CPC and household survey, 2019)

(1a) Huong Nguyen

Village	No. of HHs	No. Person	% of poor and near poor	% Katu (remainder of people mainly indigenous)	Number of surveys (n) and focus groups (FGD)
Mu Nu – Ta Ra	108	416	56 HHs – 51.8%	100%	n = 23 and 2 FGDs
Chi Du – Nghia	72	281	26 HHs – 36.11%	98.6%	n = 24 and 2 FGDs
Giong	84	344	20 HHs – 23.8%	97.6%	n = 21 and 2 FGDs
A Ry	84	321	18 HHs – 25%	76.1%	n = 23 and 2 FGDs
Total HHs of Huong Nguyen	**348**	**1362**	**34.48%**	**93.39%**	**N = 91, 26.1%** of total HHs

(1b) A Roang

Village	No. of HHs	No. Person	% of poor and near poor	% Taoi (remainder of people mainly indigenous)	Number of surveys (n) and focus groups (FGD)
A Min – C9	102		56 HHs – 51.8%	100%	n = 26 and 1 FGDs
A Roang 2	74		30 HHs – 40.54%	100%	n = 24 and 1 FGDs
KaRon - Aho	100		57 HHs – 57%	100%	n = 25 and 1 FGDs
A Chi – Huong Son	103		50 HHs – 48.54%	49 % while 41% Ka Tu people in Huong Son part	n = 28 and 1 FGDs
Total HHs of 4 villages of A Roang	**379**		**50.92%**	**93.39%**	**N = 103, 27.1%** of total HHs

2.4.2 Data analysis

Data analysis in qualitative research can be defined as the process *"…attempt to say why patterns and outcomes in the data have occurred"* (Ritchie & Lewis, 2003: 216). To deal with qualitative data, researchers bring order to the data and look for relationships between the various type of data. The logic is not based on linear variable analysis but rather use casual logic in a loose, non-universal, non-deterministic sense. The explanation rarely cites a single cause or reason but set out to clarify the nature and interrelationship of different factors or influences.

There are three levels of analysis qualitative data by Mason (2013) that I employed in the thesis. First, the literal analysis, in which I look at the literal form of the data. Second, the interpretative analysis, that includes my interpretation about the information and data. And third, the reflexive

analysis that I look at my own position in the research and other processes that have influenced the research.

Since qualitative data are rich and diverse with 100 key informant interviews, 194 household surveys and focus group discussions and observations, tools are necessary to analyze this chaos. One important way to do this is to code the data in order to manage them and even reduce their complexity (Crang & Cook, 2007). I coded my data in a way of asking whether or not the data to answer my research questions. This can be done in different ways, although the main objective is to link the data with the research questions. My coding consisted of various coding processes. First, a round of general, open coding was applied to the transcribed interviews, including in vivo coding; literal copies of the original words used. More structured coding followed up in this first coding, in which the initial codes were restudied and related to more general codes. These general codes were linked with concepts underlying the research questions. This process was sometimes done more than twice in order to sift and sort the data. Atlas.ti[6] is the software that I used to manage all of qualitative data.

Data from the survey were first presented in Microsoft Excel worksheets to draw out descriptive statistics. These statistics were then presented in tables, charts and diagrams to contrast and compare the criteria. Due to the limitation of time as well as the flows of the story based on different papers that were published in different times over 3.5 years, I used mostly qualitative rather than quantitative data in this dissertation.

2.4.3 Validation and generalization

There are certain methodological issues to be taken into account when doing qualitative and case study research. As already explained, case study research runs the risk of becoming sloppy. Furthermore, case study is also often criticized, especially in regard to the reliability of data. How can I ensure that the data are truthful and reliable? How can I validate my data and how can generalizations be made from my data? I employ Lund (2014) and his proposed analytical movements to deal with these issues. I also used various solutions that are by different authors, such as Mason, (2013); Ritchie & Lewis, (2003); Tellis, (1997).

I employed several ways to deal with the issue of validation. The most important thing is to check the information by bringing it back to the participants and making the problems and assumption explicit. Another way to improve validation of the data is to check for personal bias. The issue of personal bias is one of the main critiques not only of case study research but of ethnographic

[6] The qualitative data analysis and research software at https://atlasti.com/

methods in general. Researchers should always be careful about their own bias and be aware of their role in the co-construction of knowledge

Through triangulation I also try to check for representativeness and to get feedback from my informants. The checking is not just organized at the end of the fieldwork, it is a continuous process as well, in which the researcher constantly checks the findings with other data. In my research, triangulation consisted of checking findings from the local villagers with the findings from the interviews with the partner NGOs, experts, through the participation through the conference presentations or policy discussions, as well as findings found in the database and literature research.

Another important issue in the discussion on qualitative data analysis – and of particular interest in comparative case study research - is that of generalization of data. Many critics believe that it is impossible to generalize from individual cases and that therefore case study research cannot contribute to scientific development. Generalization means that one can make general statements that are context free; this seems to be contradictory to the assumption that qualitative research is not context free. To deal with the issue, I viewed generalizations as explanations that demonstrate variety, arrange of different views, experiences, or outcomes, as well as the factors that influenced these outcomes.

Finally, the generalization in this research has been mostly influenced by the explorative nature of the research. Exploring theories in the soft sense is a valid way of generalizing from case studies. In my research, I set out to discover different processes of forest transition and to see whether certain patterns could be distinguished from the previous literature. I did this by first generalizing the local processes to the level of actors. And then I related findings to findings at the national level and also to broader literature to see whether I could discover particular patterns.

2.4.4 Research ethics: positionality and reflection

As I conducted a micro-politics research at the local level, issues such as how I situated myself in the field and ethical concerns are worth discussing. In this section, I thus elaborate on these issues, providing an account of the practicalities of doing field research in upland Vietnam. For other researchers, methodological and ethical discussions focus on the role of the research and his/her relationship to the research participants: they discuss challenges in obtaining access to communities, boundaries of researcher-participant relationship, and concerns about participant confidentiality and protection and also compensation. I believe that my experience could be of help to those who are not so familiar with the uplands, or even familiar but want to conduct ethnographic studies there.

2.4.4.1 An iterative itinerary of inductive research

Despite having a lot of experience going and observing throughout upland Vietnam, I knew very little about A Luoi and Thua Thien Hue province, let alone its complicated history and cultural context. It is the reason why I undertook two reconnaissance trips in September 2017 and September 2018 to visit A Luoi and several communes, where I got an initial overview about the landscape, history, and livelihoods. I was already considering the Sao La Nature Reserve and its periphery (i.e. Huong Nguyen and A Roang) as potential field sites and undertook a scoping trip there. This entire landscape truly represents a miniature of forest upland transformation with all the ups and downs along the last four decades of Vietnam's development.

Starting in January 2019, I conducted my main and longest fieldwork over six months until July 2019. I then did one more month fieldwork to re-check information at the end of 2019. I was not able to revisit the field in 2020 or 2021 due to the pandemic though I had planned my fieldwork spanning a total of twelve months. Approximately three months were initially allotted to each commune, with the remaining 6 months devoted to entering and encoding data and bridging data gaps. I did break down my fieldwork into small trips primarily to avoid less than six months of absence from Switzerland as the requirement of the Swiss Federal Government to maintain my work permit. But then I realized this iterative approach to fieldwork also proved quite valuable methodologically for four reasons. Firstly, I could use the time in between the fieldtrips to transcribe, code and reflect on my data, and to plan the next steps of data collection. Secondly, my repeated returns to Vietnam, Hanoi and also A Luoi were conducive to maintain my connection and building rapport with my research participants, from national policymakers, NGO practitioners, provincial authorities to local villagers. The relationships seemed to strengthen each time I returned. Thirdly, it minimized for me the experience of fieldwork fatigue that other researchers report. Each time I returned to Vietnam, I had fresh energy and ideas, and I could maximize the time I spent on data collection. Fourthly, I found an iterative itinerary to data collection very conducive to an inductive approach of conducting ethnography and qualitative fieldwork. I could incorporate additional aspects into my inquiry that emerged during fieldwork and thus aimed to address relevant and current topics in my research.

I started my fieldwork in Huong Nguyen. Experts from Hue City gave me the following advice: "*It is a new resettlement commune since 1996. There is nothing there for you to examine. No one selects this commune as research site* ". As this was commune with which I was least familiar and lacked information from previous literature, it took me quite a long time to build rapport with the villagers and local officials here. And I found out the issues of forest changes, forest use and

management in the villages, and village politics, were also much more complicated in this commune, compared with A Roang, my second study site. Considering these factors, it took me three months to complete my fieldwork in the commune. After I completed my research in Huong Nguyen, I moved to A Roang, which is about 1.5 hours away from Huong Nguyen by motorbike. Given this short distance, I was able to visit Huong Nguyen for a number of times when I was doing my fieldwork in A Roang. Usually, on the way back from A Roang to Hue city, I dropped by Huong Nguyen and stayed there for one or two days to get some updates.

My fieldwork in each village entailed a series of steps. The first two weeks involved warm-up activities. I went around the village and commune and spoke with villagers and officials to build rapport with them. I invited a key informant who I knew well to be my guide. We went to different areas, including wet rice land, swidden lands, forestlands, acacia plantations, and community forests. I had the opportunity to ask questions on issues pertinent to my study, understand the village situation and other concerns, and identify actors that I should meet. Then I started to focus my field data gathering by talking with the villagers, including men and women, old, middle-aged, and young, sometimes joining them in going to the fields to harvest acacia, to the forest to collect rattan or forest patrols. When necessary, I invited a group of key informants to discuss issues of interest to my research. I also requested three to four knowledgeable villagers to go with me to an hilltop outlook where we could see all the village terrains to discuss the issues related to forest changes over time and to draw sketch maps. From these maps, I saw the dynamics of forest changes in the villages.

After obtaining qualitative data, I conducted a household survey. As I was already familiar with the people and situations in the villages even before conducting the survey, I was able to formulate an appropriate set of survey questions. When I completed the survey in all villages, I reviewed the data sets. Periodic visits were made to the villages to fill data gaps.

I did not stay in each commune for consecutive months. Instead, I made repeated visits to the villages, with each visit lasting ten to fourteen days. After visiting the site, I went back to my office – located at our project's partner, CORENARM in Hue city to work for several days. My work in office was mostly entering the data in my computer, reviewing the fieldnotes, checking on the plans for my next visit. There were some advantages to doing this. One is that, as I preferred hand-writing and did not want to use my computer that much in the field, this system of field-data gathering and entering helped me avoid having huge volumes of data after my fieldwork. Another is that I was able to have substantive discussions with my colleagues at office and other experts and researchers in Hue city after each visit. It also enabled me to participate in several relevant

meetings, workshops, conferences or writing courses in Hue city, or even in Hanoi and Ho Chi Minh, two other big cities of Vietnam.

The experience working with many government officials, particularly those from the agriculture and forestry agencies at the district level, provincial and national level, and also local villagers during my 12 years NGO job on policy research allowed me to establish good relationships with my research participants and consequently generate good data. The only difference is that for NGO research, we only have time to stay in each village for one or two days maximum and rarely stayed overnight in the village; while in my research, I stayed with local households for a substantial period of time, thus it made easier for me to understand better the process and dynamics of changes occurring in the area, and had the chance to triangulate my data and avoid bias.

2.4.4.2 Ethical research protocols and relationships

Many scholars emphasize the need to consider ethical issues in conducting research, particularly that which employs ethnographic methods. As Creswell (1994) stresses, the researcher must bear in mind he or she has an obligation to respect the rights, needs, values, and desires of his or her informants. To fulfill this obligation, the researcher must clearly state the objectives of his or her study so that the informants will understand what the research is about. Prior to the research, the researcher should obtain from the informant permission to conduct the research. Informants must be informed of the procedure and proposed activities of the research and must have access to the transcripts and written interpretations and reports produced by the research. When analyzing and presenting data, the researcher must consider the informant's interests and wishes. He or she must protect the identity of his or her informants by using fictitious names instead of their real names.

a. Research positionality

Based on the regulation of University of Lausanne and also the framework by Miles et al. (2014), I situated and oriented myself during the research.

First of all, working for the Research for Development project, I strongly believe that my project is worth doing in terms of both theoretical contribution and development in the Global South, as Vietnam. On the development site, Upland and ethnic minority people's lives in Southeast Asia in general and Vietnam in particular, are under transformation. In Vietnam, little research has been done to examine the social dynamics that underpin processes of forest changes over the last decades. Especially, rather than taking a birds-eye view of FT dynamics and looking at growth of forest cover as the primary metric by which we ought to understand FT, my research looks instead

from the bottom, examining how different actors conceptualize their relationships to diferent types of forests, how institutions shape these relationships between actors, and how multi-processes need to be part of the forest transition in practice. My research therefore provides policymakers and practitioners with a better understanding of how FT unfold in practice and the actual results of forest-related interventions to expand forest cover at the local level. My findings also contribute to readjustment of the current policies and its implementation mechanisms, as well as lesson learnt from 30 years of forest changes. So that these will capture more effectively, qualitatively and sustainably the rapid changes in the uplands. On the academic side, my thesis as it stands has already made useful contributions to the multiple literatures as a series of paper for different audiences (see Overview of thesis outline): the forest transition community, the sustainable livelihoods community, the neoliberalization of nature community, and the human dimensions of environmental change community, among others. My study also offers strong empirical evidence from the very unique context of post-socialist Vietnam to the on-going debates on property relations, land access and control and political ecology on forest changes.

Second, I know that my relationship with our project partners, NGOs, local actors, and informants had a profound impact on the kinds of data I was able to collect and how I interpreted those data. I had to make full use of my two roles: NGO practitioner and researcher. For example, as someone who has worked in the forestry policy field for many years, I have an extensive network of contacts not only at the national level as well as at the provincial level. These experiences and relationships really helped me in accessing information and capturing insight into policy stories in Vietnam. However, I also have to take a step back to 'delete' my personal views or perceptions that was formed along the time I worked as NGO researcher and to examine the issues in the most objective way. The long fieldwork time and communicate to many stakeholders to cross-check information helped me overcome this shortcoming.

In addition, through this research, I had a change to improve my skills in working with local people, especially ethnic minority groups in uplands and gain significant knowledge about their livelihoods, their personhoods, their desires and aspiration and their culture. This is really important for someone like me who comes from the majority Kinh group and was born and grew up in the capital city. My stamina was strengthened, as I had to work under very difficult circumstances, including lack of familiar food and sanitation problems. Having gone through these difficulties for an extended period of time, I was able to understand how hard the life of local people is. I am an introvert. I do not talk much or feel comfortable to communicate with many people for a whole day. It thus took me a longer time to get used to and adapt to the field context.

b. Logistic considerations

In order to conduct research at the local level in Vietnam, researchers have to follow various administrative requirements, depending on whether they are foreigners or Vietnamese. The researcher has to have a host organization, which could be a government organization, an NGO, and development agency, or a project office. Because, in principle, a freelance researcher without a letter of reference (LOR) cannot be allowed to work in a village. There must be a prior arrangement with the proper authorities before any researcher can enter the field.

For me, as I work under the FTViet project with two Vietnamese partners in Thua Thien Hue, I actually have two host organizations. At the same time, even if I am a full-time Ph.D. student, I still retained a status as staff member of a Hanoi-based NGO that also has projects in Hue. So prior to going to the field, I asked a colleague from these two host organizations to assist me in findings contacts at provincial, district, and communal levels that could give me the authorization I needed. I had to obtain a letter of recommendation (*giấy giới thiệu*) from these host organizations, introducing me myself to the local authority. Especially, for districts on the border with Laos like A Luoi, I also needed to provide the *giấy giới thiệu* to the security agency and border guard office. Once I have the letter *giấy giới thiệu,* was I able to approach the communal authorities and seek permission to stay and work in the commune. Based on the letter, the objectives of the research, and the proposed study sites, the commune chairman decided on whether or not to grant permission to me. The representative from the communal authority contacted village heads and introduced me as new researcher will stay in the village. At this point, I could start my work.

Though this procedure appears simple and clear, the processing of the request takes a long time especially for foreign researchers but for Vietnamese researchers like me, there are different ways to shorten the procedure. For instance, after receiving the *Giấy giới thiệu* from their host organizations, I went directly to the commune and study villages to work, bypassing district/security and border guard officials. Another informal way that often produces good results is that as I have some a good relationship with the boss of the district or province, I just asked for an introductory call from them to local authority. This is more effective than the formal one.

When I started my work in the village, the selection of a household in the village where I can stay is very important, that require further discussion. Usually, researchers prefer staying in households in good conditions so that they would not have to experience difficulties in terms of food and sanitation. In my case, I did not have the chance to check which household would be the most suitable for me to stay in, I followed the chairman's suggestion to stay with the household of

former commune leaders. This household was used to having ‘strangers’ in its home, since it had accommodated many researchers, practitioners, and students, doing a study or implementing projects in the commune. All the household members were kind and supportive me, and the household is the former commune leader, so I felt safe with them.

Despite these advantages, after first few weeks in Huong Nguyen, I realized that staying in one household, particularly of local elites, could have some disadvantages. First, villagers who did not like them were not open to me in discussing factors in forest land access, forest practices or conflicts. They were afraid that I would relay to the local authority the information they share with me. This perception lessened my opportunities to get substantial data on the complexities of village politics. Second, staying in one household unintentionally shifted my attention away from households located in other part of the village, making me miss some important aspects of the village as a whole. Third, some households, particular the poor ones, were not pleased with me, as they thought I did not like the poor families thus only staying in the better-off household. To deal with these disadvantages, I decided to stay first in the former communal leader’s house mostly but also stay in some other households, or sometimes to spend dinners with other households.

Staying in small communes as A Roang and Huong Nguyen for an extended period allowed me to observe and participate in some spiritual ceremonies of the people and hence broaden my understanding about their cultural and social life. I established close friendships with local villagers. Seeing me as a friend, they let me take part in their special activities. Sometimes, villagers have some fishes/snails from rivers nearby or honey they harvested from forests, they also called to give for me as the gift.

c. Prior, inform and consent with research participants

Another ethical issue pertains to the informant’s consent to participate in the research.

For policymakers, state officials or local authorities, prior to and during my fieldwork, I clarified to my informants that I wanted to study how and why the changes in their local managed forest landscape. I told them specifically that I wanted to identify the constraints and opportunities that villagers had to deal with these changes. Consequently, most of them cooperated with me. They were open and willing to share their opinions with me.

Following the requirements and common norms of ethical research practice, I also obtained informed consent from each local villager. I did this orally, as seeking written consent from often illiterate villagers may have been too invasive. In Katu and Taoi culture, personal introductions

are particularly important and would often take ten to twenty minutes. For many villagers, personal details about my family situation or relationship to local authorities seemed to be more important than information about my research. In addition, during the interviews, if my informant did not want to respond to certain issues, I would shift to another topic and go back to these issues later or skip them altogether.

Another crucial logistical issue for me during my fieldwork was timing. When I performed the household survey, the villagers were busy harvesting rubber latex. This activity meant that people were often not at home from 2:00am – 5:00 am, or from 9:00am to 5:00 – 6:00 pm, or even not home overnight, as they were working in their fields. Although some went back home to have breakfast and lunch or take a nap at noon, I did not disturb them. To keep up with their schedule (and my timetable for the survey), I had to conduct early and later interviews or even sometimes follow them to go to their fields. For the early interviews, I had to wake up at 5 am or so, and begin doing interviews at about 5.30 am or 6 am. The late interviews were held after the household dinner, at around 7-9 pm. Normally, village heads informed the selected households in advance and assist me in arranging and scheduling an appointment with them.

It is also important to discuss my approach to sensitive and confidential issues. My research looks into changes in forest practices among different actors, particularly in the relations among them and toward forests, unequal power relations among actors, and their different notions and visions of the forest. As apparent from my field data, many of my informants were at odds with each other. I tried to be neutral in dealing with them, but this sometimes proved extremely difficult. When I met up with local officials (mostly Kinh people, majority group), for example, some of them claimed that Katu and Taoi people in general were stubborn, destructive to the forest and lazy. I knew that what they were saying were not true, but I could not tell them my opinion. In turn, many local villagers would tell me that local authorities did not care about forests, they even are in collaboration with illegal loggers, and always prohibited their access to forest. I knew that this was not true for all local authorities.

d. Cost-benefit between researchers and informants and compensation issues

What did my informants gain from my research and what cost did they have to bear for participating in my research? My impression is that I got more from them than they got from me. Many of them spent hours talking to me. An excerpt from my field notes serves as a good illustration of this situation. When I revisited the former chair of the cooperative, he teased me by saying "*Not finished yet? I have nothing left to tell you*", and then he laughed. In addition to time, the informants gave much effort to answer my awkward, irritating, ignorant, and difficult

questions. I would ask them to recall what happened many years ago, in their old villages or to recall how much they spent on, say, fertilizers one year ago. These kinds of questions forced them to think hard to remember.

The fact that I become privy to potentially sensitive information entailed the common ethical dilemma of how to balance research and engagement, which both political ecologists and anthropologists have grappled with. More than time and effort, my informants had to bear some costs when giving me information. Some households, for example, risked having their forest protection contracts terminated when they admitted to me that they had not done anything to protect the forest and simply received PES fees. Or the many mentions of illegal encroachment, timber logging and conflicts going on between local authorities and local villagers. All of these circumstances implied ethical issues of privacy, confidentially and anonymity. My informants have right to their privacy and it is my obligation to respect and not to violate their privacy. I have no right to force them to give me information and I treated such information as confidential. As a result, I changed the names of my informants (as in Chapter #6).

So what did I do in order to repay my informants? In the literature on research ethics, much debate surrounds the question of how to compensate participants for their time. Other members in the project suggested that small cash payments were the most appropriate way to do so with villagers. Some authors warn that it can skew both the sample of respondents and the data they provide, as certain participants may be more inclined to participate in a study or compelled to provide the information, they think the researcher wants to hear.

I am also sure that balance between their 'costs' and the 'benefit' from my research was not equitable. To be honest, I did not want and also did not have much resource to pay them. I knew, however, that many of them consented to participating in my research without any thought of compensation or reward. I would not pay them in cash but in kind. Sometimes it was just a candy package, a notebook for their children, or small multiple vitamin box for old people or some others small things I can get whenever I go to the city. As regards my in-kind payment, I usually gave a household a small gift worth around 50,000 VND, or about US$1.8. In general, I tried to make myself available to them if they needed my assistance. Households in A Roang were used to receiving gifts, what I gave them no longer surprised them. I even knew that many of them expected me to pay in cash. Households in Huong Nguyen were not familiar with receiving gift, so they seemed to appreciate these. In fact, they did not expect anything from me. Seeing me several times bringing a sack of these stuffs when going around, many of household head would

tell me "*You spent a lot of money on buying gifts for the whole commune. You do not have to do it, save your money".*

As I know if I paid them in cash, this might set up expectations from villagers to receive the same thing from future researchers. They might get used to being paid as informants that they might modify the data according to how well they had been paid (although it does not necessarily follow that good pay would bring about good data, and vice versa). This is the situation that I had to deal with in A Roang, as the people had been exposed to many research and development projects. Thus, many of them expected to receive the same thing from me even though I had told them at the beginning of my research that I was a student and was conducting research in fulfillment of my university's requirement. Some households have started the conversation with me as "*Do I receive money to do interview*?" or even "*how come you don't have money? You study in Switzerland*". In addition, to a certain degree, my research was jeopardized, as some villagers compared my research with others. Even some of them had tried to revise my survey questions as "*it is not the right order*". This is also the reason why all the interviews were carried out by myself. I knew that if I had assistants to carry out the survey for me, they would not be have enough experience to avoid the situations like these.

In special cases, I paid cash to my informants who did more than just provide information. Those that acted as my 'guides' in going around the village. While this amount is sometimes even double their daily labor wages, it was worth paying them as much, since my trips required a lot of effort from them.

CHAPTER 3

Transformation by territorialization

The political drivers of dynamic forest changes in the uplands of North-Central Vietnam

3.1 Preface

This chapter consists of the first paper of the thesis. It explores the first research question on how the forest transition has occurred in the Vietnamese uplands, particularly in relation with successive state-led policies and interventions over the last three decades. State-led reforestation and forest protection policies and interventions were essential levers to increase forest cover dramatically in the country since the 1990s. The process, however, was not straightforward. It embraces a lot of fuzziness and contestation, for "*forests are highly contested spaces, the arenas of struggles and conflicts, where both trees and forest dwellers usually find themselves on the losing side*" (Doornbos, Saith, and White 2000: 1). The chapter hence sheds light on power and politics in the forest transition and on its implications on shaping/producing forest spaces. It focuses on one particular locality, A Luoi, Central Vietnam.

I develop a conceptual framework rooted in the Political Ecology and the work of Vandergeest & Peluso (1995, 1996, 2015 and 2020), notably on with the concepts of 'political forests' and 'state territorialization' to unravel this process. I investigate the discourses, visions, and actions of institutional actors from the national policy level to the local level. In particular, I focus on the design and implementation of the successive policies and interventions that aims to increase forest cover (i) 'from above' by Government agencies and (ii) 'from below' by local villagers. The analyses thus highlight power relations among actors and the strategies that have been employed to gain or control forest resource access, producing the various political forest territories that we see today.

The chapter, therefore, plays an 'entering the field' role for the empirical section of the dissertation. It presents not only (i) the dynamic transformation processes in forest landscape spaces and people, from historical and geographical perspectives; but also (ii) a nuanced story about the effects and grounded outcomes of layers-upon-layers of forest policy in contemporary Vietnam.

Authorship Statement: Lead author

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3.2 Paper

Title: Transformation by territorialization: The political drivers of dynamic forest changes in the uplands of North-Central Vietnam

3.2.1 Abstract

Vietnam has been lauded as a successful example of a 'forest transition' (FT), where rapid deforestation is followed by a period of widespread reforestation. The turn-around resulted from underlying drivers linked to economic development and broad structural transformations, as well as to state-led larger-scale reforestation and conservation programs since the 1990s. In order to understand better how the FT process unfolds, the article employs the notion of 'territorialization' as a spatial lens to examine how the general driving forces are actually implemented on every single forest space through multiple layers of strategies by multiple actors. Through the case study of A Luoi district, Thua Thien Hue province, Upland Central Vietnam, we argue that underneath the superficially smooth curve of forest cover increase is a more complex construction process. Actors, spanning from the Government to villagers with their own territorial strategies, have shaped it step-by-step in particular ways. The process is characterized as a co-production, a layer-upon-layer path-dependent process whereby contemporary forest spaces are built upon or re-worked based on past models and practices. The forest transition is thus the long-term outcome of spatial interactions of power where different discourses, visions, desires, and agencies of the state and local villagers cooperate, interact, or compete to gain and maintain control over forest resources. The Vietnamese upland forests nowadays, as we conclude, have been turned into a space of dynamic transformation, providing a lot of opportunities but also posing challenges to predict whether a forest transition can ultimately be sustainable.

Keywords: Territorialisation, forest transition, political ecology, power relations, resource control, Vietnam.

3.2.2 Introduction

The 'forest transition' (FT) (Mather 1992) is a simple but powerful concept. It links forest cover dynamics to broader societal, political, and economic processes and might provide lessons for a broader transition to sustainability (Meyfroidt and Lambin 2008b, Kull 2017). Discussion of FTs and their implications have grown intensively, at both the academic and the policy level, over recent decades. A growing number of countries have witnessed or aimed toward a turn-around, from net deforestation to increases in forest area. This has been accompanied by large-scale campaigns for forest rehabilitation and reforestation, and for halting or reversing impacts of global climate change in recent decades (Rudel et al. 2002; Rudel et al. 2005; Ewers 2006; Meyfroidt and Lambin 2008; de Jong 2010; Rudel et al. 2020)

Whereas the literature has described FTs and their drivers/pathways through both statistical and case-study analysis by different disciplines in different settings (global, regional, national, and local level), much less attention has been paid to the role of political and social interactions within forest spaces and their implications for fostering forest cover changes (de Jong 2010; Sloan 2016; Kull 2017). According to Garcia et al.'s (2020) global scale analysis, changes do not just happen passively with spontaneous regeneration of trees; actors shape the process. The occurrences of FTs in practice, thus, are not as simple and predictable as the curve of forest cover in FT theory suggests. It is more complex (Mather 2007) due to the messy, power-laden interactions among institutional actors and their varied views, discourses, and visions about forests (Kull 2017; Riggs et al. 2018).

The question becomes even more crucial in the context of contemporary struggles over tropical forests (Garcia 2018; Riggs et al. 2018; Scheidel and Gingrich 2020; Pichler and Ingalls 2021; Doornbos et al. 2000; Peluso and Vandergeest 2020:1083). Two of the most obvious trends shaping the making of forests across the Global South have been the large-scale expansion of tree plantations on previous or current forest land (Vandergeest and Schoenberger 2019) and the shift to a new wave of conservation efforts largely characterized by *green neoliberalism*, or the use of market mechanisms and increased governance roles for non-state agents (Devine and Baca 2020). Under these new dynamics, state and non-state actors are busily dividing forests into conservation and production territories at various scales (Arsel and Buscher 2012). These dynamics dissolve existing orders – even as they format and deepen trajectories of power and resource control within forest territories – and build upon and rework space anew (Rasmussen and Lund 2018). A forest transition, in short, can be seen as a frontier (Hirsch 2009) of spatial, temporal, political, economic, and ideological contestations and tensions.

In order to contribute to a more nuanced understanding of FTs, in this paper we read the forest transition through the lens of 'territorialization'. The concept, according to Rasmussen & Lund (2018) can be understand as a "*strategy of using bounded spaces for particular outcomes, a resource control strategy that involves the classification of particular areas in order to regulate people and resources*" (p.388). It offers us a useful lens to examine how different actors seek to shape forest spaces under the influence of broader political and social forces. In short, it helps us to capture quickly "…a *shorthand for all the dynamics*" (ibid, 388), such as property systems, political jurisdictions, rights, and social contracts, that establish and re-order forest space anew.

To do so, we selected Vietnam and in particular A Luoi district in Thua Thien Hue province as our case study. Vietnam is considered an attractive case as the country is among the very few countries in the Global South to have experienced an FT turn-around at all levels over just a few decades (Meyfroidt and Lambin 2008; de Jong 2010; Meyfroidt et al. 2010; Meyfroidt 2013; Cochard et al. 2017; Dao and Yasuyuki 2017; Traedal and Angelsen 2020; Cochard et al. 2020). While initial FT theory, as developed around the cases of western Europe and North America, emphasized economic development and broader structural transformation as the driver of FTs, the shift in Vietnam has largely been attributed to the implementation of successive and massive state-led reforestation and forest protection efforts and the engagement of local villagers in devolution processes across the country since the 1990s (de Jong 2010; McElwee and Tran, upcoming; Meyfroidt and Lambin 2008b; Sikor 2012; Sikor and Baggio 2014). The article, therefore, takes a step further to go in-depth underneath the surface of the FT process, to understand how it actually occurs in practice. In other words, we aim to unravel how these general driving forces of FT are implemented on the ground through multiple layers of territorialization strategies of actors over the complex history of Vietnam's state forestry sector over the last decades.

This article proceeds as follows. In section 2 we discuss the main theoretical concepts in order to develop an analytical framework for the paper. This is followed by a section about the methods to analyze FT at both the national policy level and local practices at the district level through a case study in A Luoi. Section 4 describes how the State's will, policy, and interventions have shaped the FT process through successive state strategies of forests and people in Upland Vietnam over the last three decades. In line with local interests in forest resource property, access and control, and legitimacy, the case study examines how local reactions have been co-produced with these state interventions in territorializing, and then shaping contemporary forest spaces. We conclude that the FT is co-produced by actors operating across multiple temporal and spatial scales through layer upon layer of territorialization and resulting in the still changing landscape

of today. This argument adds considerable nuance to the often-simplified drivers and pathways evoked in FT literature. A particular contribution of this paper is to describe how contemporary spatial FT in practice looks like - full of contradictions and compromise – which has not been addressed anywhere in FT literature yet.

3.2.3 Transformation through territorialization: Theoretical background and analytical framework

The Forest Transition (FT) – as first introduced by Mather (1992), refers to a development over time in forest cover. The early phase is defined by high forest cover and low deforestation rates. It follows by the phase when deforestation rates increase, and forest cover declines sharply. Later, various processes (drivers/pathways that we will describe below) lead to a turn-around, with widescale reforestation and afforestation overtaking deforestation (Rudel, 1998; Rudel et al., 2002; Traedal & Angelsen, 2020).

The FT literature has, as a result, focused on forest cover change and on linking it with macro-economic variables to explain how, in various ways, it can happen (de Jong, 2010). Two main pathways leading to FT have been proposed: the economic development and the forest scarcity paths (Rudel et al., 2005). The *economic development path* suggests that forest regeneration (often spontaneous) was facilitated via unplanned side effects of economic growth and modernization. Rural to urban outmigration and increased agricultural field productivity led to the abandonment of marginal, lesser productive lands which then could revert to forest. The 2nd common path, *forest scarcity path* occurs whereas a result of forest loss, the demand for timber and other forest products will increase. This becomes an incentive for development, realignment and stringent enforcement of new state policies in forestry and natural resources management lead to active tree planting and better management and protection of forestlands (Angelsen & Rudel, 2013; Satake & Rudel, 2007).

While initial attention was focused on FTs in industrialized nations in western Europe, North America, and Japan/Korea, more recently, emerging FTs have been described in developing countries, including some countries and territories in Asia, including India, Bhutan, southern China, and Vietnam (Meyfroidt & Lambin 2008a, 2009, Song & Zhang 2010, Lestrelin et al. 2013, He et al. 2014, Singh et al. 2015, Bruggemanet al. 2016, Liu et al. 2016, Cochard et al. 2016). Specific trends, furthermore, indicate that a few countries in Asia (e.g., Nepal, Bangladesh, Thailand, and the Philippines) (cf. Meyfroidt & Lambin 2011, Southworth et al. 2012, Youn et al. 2016, FAO 2016) may be reaching the 'bottom of the U-shaped curve, with a FT perhaps about to start. In these new contexts, the literature proposes five possible drivers, splitting from the two

main paths identified earlier and adding policy changes in response to these. The five new paths include: (i) economic development and land abandonment due to economic change; (ii) scarcity of forest products as a result of shrinking forest stocks and increasing demands and scarcity of environmental services provided by forests; (iii) state forest policies responding to perceived scarcity or conservation needs; (iv) globalization (including in- and out-migration, remittances, and the circulation of neoliberal market and conservation-oriented ideas); and (iv) smallholder tree-based intensification leading to concentrations of cultivated area and gradual reforestation of hillsides. The research thus has put an important step forward from the initial theoretical model when expanding the knowledge on driving forces behind forest recovery and descriptions of the land-use change on the ground (Angelsen & Rudel, 2013; Satake & Rudel, 2007; Lambin and Meyfroidt 2010; Meyfroidt and Lambin 2008; Meyfroidt et al. 2013; Rudel et al. 2005).

Forests, however, are highly contested political spaces, arenas of struggles and conflicts among actors to gain power over resources within every forest space. Changes in forests do not just happen passively with spontaneous regeneration of trees, but actors shape them. Critics of the FT studies thus have recently come under fire for over-relying on generalized forest cover data and general macro social-economic variables and trends (Cochard et al., 2020; Garcia et al., 2020; Kull, 2017; McElwee, 2016; Turner & Robbins, 2008). This approach, as we argue, can downplay or oversimplify a more complex and broader range of political reactions among actors, who play crucial roles in shaping and producing forests and lead to forest changes.

In contributing to this recent debate about FT, the article proposes to read the FT differently. It is therefore very important to develop an analytical framework in order to elucidate this 'landscape' of FT making. A political ecology approach and the notion of territory and the related terms of 'territoriality' and 'territorialization' thus provide us very useful lens to unravel how the FT unfolds in the practice by whom and under what mechanism (cf. Basset & Gautier, 2014; Rasmussen & Lund, 2018; Vandergeest, 1996; Vandergeest & Peluso, 1995).

In this paper, forests are understood as 'territories', or socially constructed spaces that are characterized by their historical, cultural, technical, ecological and political-economic origins (Elden, 2010). Forest territories, therefore, are "*discrete, distinctive, bounded, measurable, communicable spaces that are deliberately created in an effort to achieve certain social goals*" (Murphy, 2012: 164). They are both in a relation with and an outcome of the process of *territoriality,* as an "*attempt by an individual or group to affect, influence, or control people, phenomena, and relationships by delimiting and asserting control over a geographic area*" (Sack, 1986: 19). *Territorialization,* further, refers to specific territorial tools/mechanisms in which

various actors deploy their territorial strategies (territoriality) to produce bounded and controlled spaces (territory) to achieve certain effects (Basset & Gautier, 2014). The combination of these definitions enriches understand the FT-making as a process that produces political and social relations among actors over every single forest space at the same time that forest spaces are produced.

A common goal of territorialization in forest spaces is to govern people and resources located within and around the territory (Scott, 1998). In the context of Southeast Asia, and Vietnam, for instance, forests have long been subject to attempts at state control, resulting in complex and overlapping political and economic zones. States have been "*re-arranging people and resources within these units and create regulations delineating how and by whom these areas can be used. These zones are administered by agencies whose jurisdictions are territorial as well as functional*" (Vandergeest & Peluso, 1995: 387). State territorialization thus also refers to the inclusion and exclusion of people within specific forest boundaries (To, 2015). It also represents to a 'culture of control' over forest spaces by the States (Peluso, 1992). In order to create and maintain forest territories, according to the work of Vandergeest (1996) and Vandergeest & Peluso (1995), states employs various tools and interventions following various stages. It usually starts with the establishment of a structure of state agencies mandated to be responsible for natural resources; then is followed by the demarcation and classification of resources on the ground and the registration of people in relation to these resources through the system of regulations.

Many political ecologists and other scholars have since also drawn on the concept of territorialization in their analyses of property, access, land rights and livelihoods (Ribot and Peluso 2003; Li 2007; McElwee 2016; Sikor and Lund 2009; among many). They importantly observe that state territorial strategies are not static but transformed by different factors, including human resistance. Other actors along the implementation can influence state strategies by (re)configuring the power relations that give rise to such territories. For example, as the states encounter pre-existing resource claimants, such as local villagers, a culture of resistance can appear, derived from people defending their customary rights of forest access and use, as well as control over their traditional forest territories, or resisting the terms of states (Peluso, 1992; Peluso & Vandergeest, 2001). The politics of forest territory making has thus for a long time in practice always been marked by conflicts and violence as struggles over benefits and power (Basset & Gautier, 2014).

In recent decades, multiple trends of neoliberalism opened new paths, processes and mechanisms in the territorialization of forest spaces. These trends involve diverse actors, institutions, and

spatial practices. Programs such as Payment for Ecosystem Services (PES), carbon offsetting, smallholder commercial tree plantation and many other market-oriented initiatives are creating new opportunities for both state and local actors to set up new territorial strategies (Brockington & Duffy, 2010). Phelps et al. (2010) have argued that the monetization of forestry through carbon payments under REDD+ offers further motivations for the state to (re)claim control over forests. Suhardiman et al. (2013) and To and Dressler (2019) also investigated whether or not PES is a new tool of state territorialization. They argue that government discourses on the 'success' of PES has served as an effective vehicle to deflect attention from the weakness of the forestry sector, to generate new funding for the sector's survival in the face of enduring budget shortages, and to expand state power in relation to forest resources in the case of Vietnam. At the same time, the establishment of public-private partnerships and the privatization of services, de-collectivization, decentralization, and devolution (Larson & Ribot, 2004) have underpinned the rising influence of private and non-profit/non-governmental interests on what were previously state domains. The particular role of NGOs and local villagers in this transition can be traced to the 1990s version of neoliberalism that emphasized civil society assistance in state policy formulation and implementation as well as the territorialization process (Corson 2011; Peluso 2017; Rasmussen and Lund 2018). Under the neoliberal context, as Bassett & Gautier (2014) summed up, territorialization is now a polycentric process, where the production of territories springs from multiple sources and locations, in contrast to the just state-centric focus.

In the paper, we thus contribute to both forest transition and territorialization literature by proposing the notion of 'transformation by territorialization'. The concept provides a new heuristic approach that allows us to get in-depth into how FT unfolds by whom and under what mechanisms. We assert that the FT process in practice needs to be examined through the lens of resource control and contestation, providing a history of different forest policies that have been pursued by the government, and how these have been adopted or contested by local people. Vice versa, we show the use of a perspective of territorialization is enable us to understand fundamental changes in the forest management over time. We can make three main arguments from this cross-fertilization.

First, we show how state territorialization has underpinned Vietnam's forest transition. Different government policies and interventions have been designed and employed to change the forest-people interaction in practice. Going underneath the linear forest cover development, forest transition now can be visualized as 'a landscape' of forest territorial production by multiple actors. The forest transition curve or forest cover development thus is shorthand of all the dynamics that shape and re-order forest spaces anew over time.

Second, under the post-socialist[7] context of Vietnam, the relationship between the state and villagers in the territorial making has been vastly more varied and complex than is usually assumed. So, the territorial making process, or broader the FT making, thus is not just state-centric, but rather spins to local villagers. We argue that the politics ad the territorialization originates with the government from above in the early years, and gradually becomes more of a mix with territorialization from below. The extent to which state territorial strategies can prescribe activities within deliberated spatial boundaries depends on how local actors react, negotiate, and capture aspects of these strategies and insert their own motives and desires in practice. This also reflects a gradually stronger power with the local landusers vis-á-vis government. To illustrate the argument, in this paper, we pay particular attention to the role of villagers through two new neoliberal initiatives: PES and smallholder tree plantation.

Third, using territorialization to read FT also allows us to look at the conflicts/tensions in the territorial making and to see them as not just resistance to control but as a process that fosters changes. When new tensions occur, another round of territorial strategies is designed and implemented to change or (re)negotiate the distribution of benefits, burdens, and risks. It thus suggests, even though the new interventions can create new tensions, but at the same time, they may address past or existing problems to achieve better outcomes. The making of FT, as we argue, are assemblages of continuous 'push-and-pull' mechanisms over time to facilitate the increase of forest cover.

In the next section, we use the case study of Vietnam's forestry development and the transformation of A Luoi district to illustrate these three arguments.

3.2.4 Methods

3.2.4.1 The study sites

A Luoi (see Figure 4) is one of two mountainous districts of the Thua Thien Hue (TTH) province, approximately 70 kilometers west of Hue City. The district is embedded in a forested mountainous area along the border to Laos PDR. The district's forests account for about one-third of the province's forests and forestland, covering approximately 110,000 hectares, with the forest cover at about 75% (A Luoi FPD, 2019). A Luoi's vast and high biodiversity natural forests form the 'green corridor' connecting coastal forests with inland Annamite Mountain forests (USAID 2020).

[7] Vietnam's post-socialist period can be considered since the country has literally shifted from central-planning and self-isolation to market-oriented economy since 1986.

The district is populated mainly by people of Katuic speaking ethnic minorities, including Katu, Taoi, Bru-Van Kieu, Pako, and Pahy people. In the past, these people gained livelihoods from small-scale traditional shifting swidden agriculture within variable terrain and from wild products derived from the dense surrounding rainforests. Nowadays, their livelihoods are increasingly characterized by fixed-field rice and cassava agriculture and small-scale commercial plantation forestry (mostly acacia and rubber) as well as participation in forest protection and commercial forest products collection (like rattan).

A Luoi is ideal for the research given its notable ongoing forest landscape transformation. During the 1950-the 1960s or the Vietnam-American War, fierce battles raged in A Luoi Valley which, with its dense forest cover, was a passageway for the infiltration of North Vietnamese army units to South Vietnam. Right after national unification of 1975, under successive state-led interventions, the district has seemingly been able to turn from post-war destroyed landscape into forest conservation-production cluster in just a few decades. Many communities were re-settled by government programs from remote areas into the central A Luoi valley, with the emptied areas subsequently being developed for hydropower dams, for natural conservations, and timber production forestland of state-owned forest companies (Arhem, 2014; Beckman, 2011). In addition, swidden agriculture and many forest uses were prohibited by law, compelling the communities to adopt new, more intensive forms of agricultural land management and commercial tree plantations, especially acacia and rubber. Along the process, diverse traditional methods of resource production and subsistence have been gradually shifted (Bayrak et al., 2015; McElwee, 2016).

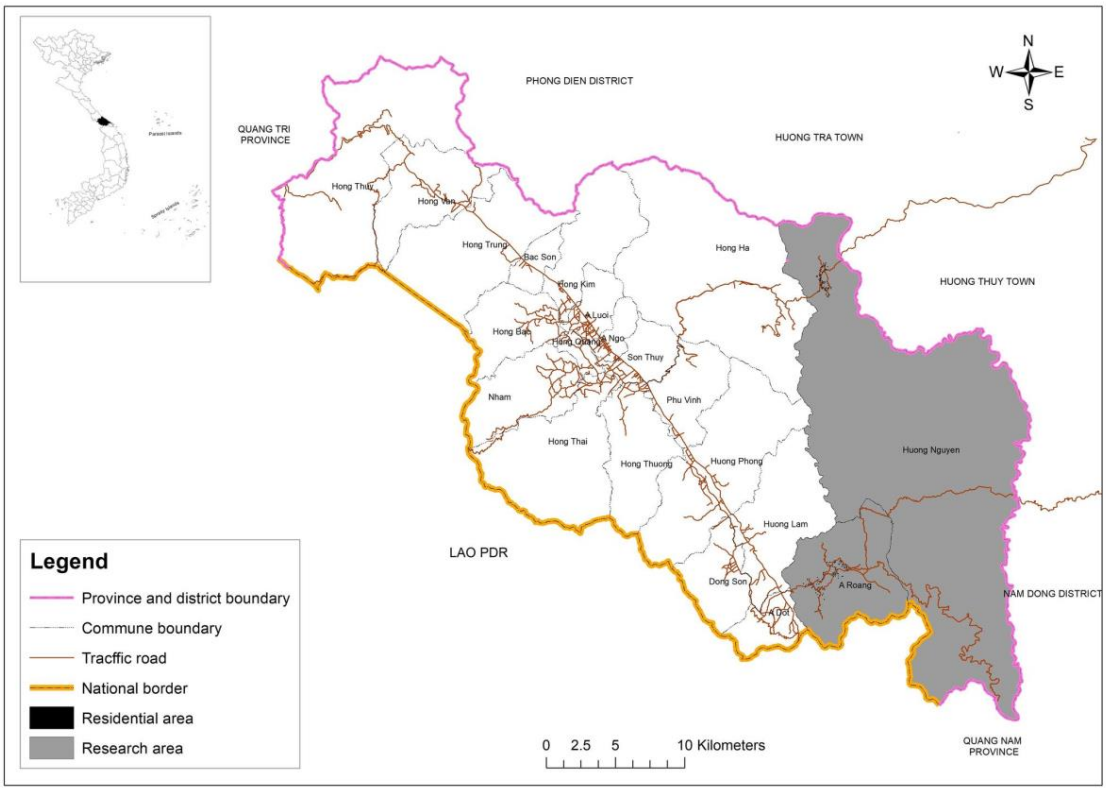

Figure 6 - Field site: A Luoi district, Thua Thien Hue

3.2.4.2 Methods

To unravel the unfolding layer-upon-layer state territorialization processes occurring in a period of FT, we focus our analysis on Vietnam's national policy and a case study in A Luoi district, Thua Thien Hue province. The national-level case study is based on an analysis of reports, publications, laws, and policy regulations. For the six-month fieldwork, we adopted participatory observations and in-depth interviews with relevant actors (see Table 3). These interviews provided insights into the state's strategies and their implementation, and of interviewees' perceptions of impacts and outcomes. Based on the interviews, we also documented local historical forest changes, forest-related activities, and livelihoods. The sites selected based on the preliminary fieldwork in 2017 and secondary data online shared a number of characteristics: (i) significant transformation of the forest landscape over time; (ii) a forest conservation-production cluster with different types of forests, such as natural and plantation forests as mentioned above. After fieldwork in 2019, due to the global pandemic, we maintained communication with the interviewees through social media, such as Facebook, Skype, or Zoom, all of which are commonly used.

Table 3 - List of key informants

Key informants	Numbers
Policy makers	8
Experts and researchers	5
Provincial governments	8
District governments	3
Forest rangers/professional protection staffs	4
Local authorities	5
Village headers and elders	16
NGOs	9
Forest owners	
• Sao La Nature Reserves	4
• A Luoi Protection Management Board	4
• Nam Hoa State Forest Enterprise	4
Head of community forest protection team	10
Villagers	20
Total	100

3.2.5 Forest transition through state territorialization in Vietnam

Vietnam has a long history of the state playing a dominant role in all sectors, including forestry. The familiar assumption is that the turn-around of forest cover since the 1990s was primarily shaped by shifts in state policies that reflect the government's evolving emphasis and interests in forests and in strategically zoning, prioritizing, and managing different forest spaces to increase forest cover (cf. Sowerwine 2004; Dang et al. 2012; McElwee 2016; To and Dressler 2019). Taking a step further, in this section, we use the notion of territorialization to describe the state-policy driven pathway by which the FT unfolds through over time (see Table 4).

3.2.5.1 State territorialization pre-1980s

Prior to the country's independence in 1954, forests were managed by the French colonial state. However, owing the absence of colonial rule in the uplands, virtually all forests in remote areas still were managed by local communities (To, 2003). After the defeat of the colonial power, the Government aimed to nationalize forests completely. It applied this to the North during the Vietnam War and continuously introduced it to the South after the national unification in 1975 (see McElwee 2016 for a history). From the 1950s-1980s, the forests were managed by a large number of state forest enterprises (SFEs). These state bodies operated the state-controlled management system over people and resources, including industrial timber logging,

replanting/nurturing, and managing the state forest estate. More than 420 SFEs were set up in the period (McElwee, 2004).

At the same time, local people, especially those with shifting cultivation practices, were considered a key driver of deforestation and land degradation (Pham et al., 2018). They thus were excluded entirely, at least in principle, from accessing and benefiting from forest resources. This demarcation of boundaries to facilitate timber extraction coincided with the period of centralized socialist government administration planning, such as the 'sedentarization' program, which led thousands of swidden cultivators into sedentarized state-planning villages.

It can be argued that forest nationalization policies of the government territorialize in the sense theorized by Vandergeest and Peluso (1995). The process encompassed the establishment of a structure of state agencies, SFEs mandated to be responsible for natural resources; then is followed by the demarcation and classification of resources on the ground and the registration of villagers in relation to these resources through the system of regulations and resettlement programs.

Table 4 - The layer-upon-layer state territorialization

Layer	State emphasis and interests/conditions	Strategies on forests	Strategies on people	Forest Transition Phase
Pre-1980s	**State's territorial strategies**			
	Central Planning Economy and Management	Nationalization on forests: all forests as state property	Regardless of the traditional claims of local villagers	Management and sustainable timber exploitation
	Authoritarian centralistic governance in Forestry Sector	Established state-owned forest enterprises (SFEs)	Resettlement of swiddenners into sedentarized, state-planned villages Fixed and cooperative agricultures, swidden bans	
	Forests as zones for intensively managed to produce timber with regularity for the state	Industrial timber exploitation timber		
	Spatial dichotomy territorialization in practice			
	• State property system vs. Local traditional claims • Intensive central managed timber logging vs. local forest-based livelihoods			Large-scale deforestation
Late 1980s – 2006	**State's territorial strategies**			
	Economic Reform: Market-oriented socialist with the dominant role of the state	Both State and people must carry out forest protection and development	Continue Resettlement Program	Period of Protection and Rehabilitation
	Forests have timber and other values for forests, such as biodiversity conservation or aesthetic enjoyment by tourists	Re-classification and zones with 3 types of forests: special-use forests, protection forests and production forests	Partial devolution in natural forests but mostly state control SFEs transformed into Forest Management Boards and SFCs	
	Devolution in Forestry Sector	Natural forests under strict protection: Logging bans		
	.	Plantation forests to develop industrial timber sector and for poverty	Completely devolution through Forestland Allocation and	

		alleviation: large-scale reforestation and restoration programs	Engagement of local villagers in tree plantations	
	Spatial dichotomy territorialization in practice			
	• Protection/conservation vs. the expansion of forest tree plantation • State strict protection vs. partial socialization/devolution			The increase of forest cover and expansion of smallholder tree plantation
2006 – the 2020s	**State's territorial strategies**			
	Intensive market-oriented socialist with the significant development of private sectors and market forces Market-based forestry sector Re-defined values of forests and provide the capital needed for preservation	Continue open toward relying less on the state and more private actors Natural Forests: PES/REDD+ Plantation Forests: Industrial and commercial plantation	Upland development and transformation Continue Natural Forest Land Allocation to local villagers through PES/REDD+ policy Smallholder commercial tree plantations Sustainable Forest Management	Maintain the increase of forest cover annually but combat deforestation
	Spatial dichotomy territorialization in practice			
	• Conservation vs. Production • State control vs. private sector/villagers' participation • Internal deforestation: tensions between the expansion of tree plantation booms and large natural forests for conservation/environmental services			Bifurcation and risks of inversion of the FT curve

3.2.5.2 State territorialization in late 1980s-2006

In the late 1980s, the forestry sector underwent a crisis in Vietnam. There were conflicts between SFEs and the local villagers, as many villagers demanded access to the land that was monopolized by the SFEs. Other problems persisted within the State forestry system when heavy logging on the part of the SFEs. Vietnam's prime forest areas were virtually wiped-out and many SFEs were unable to operate due to the lack of timber in the forest, particularly in the second half of the 1980s. At the same time, there was a change in political economic context, when Vietnam decided to shift from a centrally planned economy to a market-oriented one, the so-called Renovation (Doi Moi) policies in 1986. Doi Moi brought profound changes in the way the state classified, used and managed the forests. It also marked the 2nd layer of state territorialization in Vietnam.

"The most important issue of forests in Vietnam is protection" – This statement reflected the strong commitment of the Vietnamese Government when they released an important report highlighting the issue of forest loss (Ministry of Forestry, 1991). Following this statement, the Government first shifted the function of the forestry sector from forest exploitation to forest *production and protection*. To do this, the state imposed a complete logging ban on natural forests nationwide and classified the remaining forests into three types and developed corresponding legal regulations for governing them. In detail: the forest areas were considered as important for biodiversity conservation, ecosystem and gene resources, as well as for maintaining environmental, historical and cultural values as protected areas, were designed as special-use forests. This type of forests accounts for 10 percent of total forest area. The second type, protection forest, which accounts for 30 percent of total forest area, was set aside for the protection of the environment in general, and watershed and soil in particular. These two types of forest management were assigned to 'management boards', thus establishing a new type of state institutions. The third type of forest, production forests, contributes around 60 percent of the total forest area, were designed as the source of wood and forest-based products.

Secondly, it changed the forest management regime and structure from state forestry to commercial and household-based forestry. Devolution and participation thus become the new focuses of forestry and materialized in a series of key legislation in forest management. In this way, control over the forest was transferred from the state to multiple actors, both state and non-state. The State allocated production forestland to organizations and individuals, depending on the value of the forests or type of forests. Special-use forests and protection forests could be contracted to organizations or individuals for protection purpose or re-planting forestry trees but not for utilization. At the same time, forest land was surveyed, mapped, parceled, and allocated or contracted to individuals and households for reforestation, timber production, and forest protection

through the Forest Land Allocation program since the beginning of 1990. The issuance of the 1993 Land Law further accelerated this devolution process, with villagers who received forestland formally granted land title, which certifies the legal status of the landholder and gives five rights (to exchange, transfer, lease, inherit, and mortgage) over land. Such policies were critical in incentivizing the rehabilitation of forest areas in the mountainous regions of Vietnam.

Thirdly, go along with the devolution process, the function of state forestry agencies, such as SFEs and management boards were broadened with diversification of activities, such as forest plantation, forest protection and service provisions.

Finally, the Government also directed more investment in the improvement of production and processing technologies of the forestry sectors, with the objective to provide timber and forest products in the future. The State promoted major nationwide reforestation programs, including Program 327 (1993-1998) and later Program 661 (1999-2010), which aimed to plant trees and protect critical watershed areas. In this situation, reforestation was understood as any expansion of trees, whether by planting trees on the land previously classified as forest or temporarily unstocked forestland or by natural forest regrowth on land previously under another land use. These programs operated through the remaining SFEs and newly established management boards, with these organizations signing forest protection contracts with different actors, including many households paid for protecting the forest and planting the trees.

By reviewing the laws and supplement policy regulations, re-classification and devolution policies were two main significant interventions that marked the difference of this 2nd layer of state territorialization. These interventions imply the state's attempt to control forest spaces and people by drawing boundaries and specifying activities that allowed or not allowed within these boundaries. In addition, the devolution process with forest land allocation program (FLA) also aimed to confine villagers to certain portions of land with rigid boundaries on the fields, as well as on the map by registering them in land system.

In addition, the re-classification and devolution process also reveals the spatial dichotomy power over resources. The government selectively choose the devolution policies to be implemented in the way that maintain their primary control over the most important forests, notably special-use forests and protection forests. Within these territories, human activities such as cultivation, logging and even NTFPs harvesting, are extremely restricted. These forest territories thus are under strict regulation for protection and rehabilitation. The less important forest or forestland (without forests) were allocated to mostly local villagers, with two purposes: (i) rehabilitation for poor forests; and (ii) tree plantation to re-green bare lands.

This period is also significant for the emergence of smallholder forestry. In many countries worldwide, commercial tree plantations are often undertaken by state forestry companies or by large enterprises investing in large material production areas. In contrast, Vietnam is one of the few countries where this work is mainly done by smallholders (Sikor 2012, Dermawan et al., 2013). This practice comes from the forest land allocation that the State initiated in the mid-1990s, with the goal of 'making every land, every forest, and every hill owned. Since then, nearly 1.4 million households in Vietnam have been allocated 4.5 million hectares of forest, or around 1 to 3 ha per household. According to To & Tran (2014), FLA policies have motivated households to invest in tree plantations, increasing forest cover across the country. Research by Castella et al. (2006) also emphasizes that forestland allocation caused households to change their land-use plan, from shifting cultivation to tree plantation, thereby making forests recover, contributing to recovery of forests.

After just few decades of big reforms, Vietnam has seemingly been able to shortcut the forest transition (FT) by quickly moving to the reforestation phase. We argue, that in this period, the turn-around in forest cover was due to a convergence between two state-led paths (production and protection) and between the efforts of State and local villagers, to whom have been transferred part of the power over forests.

3.2.5.3 State territorialization since 2006

The next layer of state territorialization was marked by the active engagement of Vietnam in new market-oriented environmental policies and the booming of tree plantations and the timber industry. Forests (natural) are now re-imagined through their ecological functions, ecosystem services, like carbon sequestration, or water flow, hoping that the market will provide a more efficient, less expensive way to arrest degrading activities than the traditional state policies (McElwee, 2016). Given the strong role the state has long played in forest management, and the fact the 'free-market' had been considered as anathema, the rapid adoption of these approaches in Vietnam has been surprising (McElwee (2012).

Payments for ecosystem services (*PES),* which transfers funding from users of ecosystem processes to those who provide soil, water, and forest conservation, was first mentioned in official Vietnamese government policies in 2006 with the release of Vietnam's Forest Development Strategy until 2020. The strategy highlighted that PES was a potential mechanism for forest protection and biodiversity conservation, and revenue-raising. Government projections estimated that the country could derive US$900 million in 2015, growing to US$ 2 billion in 2020 from PES schemes. At the same time, another emerging policy would provide funding from international

carbon buyers to forest-conserving communities, known as 'Reduced Emissions from Deforestation and Degradation" (*REDD+).* By 2014, thirty-five REDD+ pilot projects were operating in Vietnam, representing an investment of over $70 million. And two national REDD+ programs, UN-REDD+ and FCPF, are still on-going.

As To and Dressler (2019) argued, the Vietnamese Government had fully reproduced and embraced the narrative of PES success and thereby made it central. The rapid impetus to develop PES in Vietnam has been driven by the government agencies and support from international NGOs and followed by developing and revising legal forestry frameworks. New state agencies such as the Forest Protection and Development Fund and the REDD+ office have been established across scales to manage and implement PES and REDD+ activities. These new state entities and structures have facilitated state territorialization strategies in the upland forests by re-zoning forests into different spaces of nearly 60 designated hydropower watersheds where provincial and national officials have determined sufficient forest cover for compensation. In 2016, 5.3 million hectares of watershed forest, or 38 percent of Vietnam's total forest area, was designated and eligible as 'forest for ES provision' across the country (Nguyen & Vuong, 2016). Within these watershed units, new rules or actions to maintain ecosystem services functions have been identified and allocated among actors. Forest owners can be households if they meet one of two criteria: they must either have a Red Book conferring tenure and user rights to forests (either individually or as a group) or have signed a contract with a state forest owner to protect forest (McElwee et al., 2020). However, according to the state statistic data, over three-quarters of PES revenue goes to state-owned entities, such as Forest Protection Management Boards, state forest enterprises, local authorities, or other social, political organizations (VNFF 2020). Many, not all, of these state institutions typically subcontract to local households for forest protection and pay them with PES fees, creating a type of 'labor' contract. To & Dressler (2019), therefore, concern that PES is a vehicle to deflect attention from the weakness of the forestry sector, to generate new funding for the sector's survival in the face of enduring budget shortages, and to maintain state power in relation to natural forests.

Additionally, the introduction of Payment for Forest Ecosystem Services (PES) policies through market-based mechanisms since 2010 was expected to combat deforestation, conserve the remaining natural forests areas as well as increase the 'value' of natural forests to create a balance for the plantation forests. However, in fact, this policy exerted minor influence (none to negative) on natural forest cover (Cochard et al. 2020). These issues, consequently, lead to number of tensions in forest governance practices, especially between plantation/production vs.

protection/conservation purpose (Nguyen et al., in press – Chapter 5 of this thesis)[8] . They also lead to tension among actors, such as among different state agencies or between state agencies with rural communities, or even among villagers, as results of the intervention on forest uses (To and Dressler 2019; McElwee, et al. 2020, Nguyen & Kull, in press).

In sum, we make two interrelated claims about forest transition through territorializations at the Government policy level across all three periods.

First, the making of forest transition over the last three decades in Vietnam is an example of state territorialization on forest land over time. The government, from above, has started to make their deliberate objectives of increasing forest cover through various interventions, such as: surveying mechanisms; classifying, mapping, and registering forest land parcels; a set of processes defined as territorialization to design specific incentives and regulations on both forests and people in every single designated forest territory.

Second, state territorial strategies are not static but transformed by the global knowledge network on forest governance, by people's resistance, and by the physical properties of the forests (McElwee, 2016: 6). The forest transition did not just happen after one try but is the result of path-dependent yet dynamic layering of state territorial strategies over decades. At each step, the new has been built upon, reworked or even repaired the past models and practices. We identified three main layers of state territorialization in Vietnam's forests. The first layer is the pre-1980s period that coincided with the large-scale deforestation. The second layer of state territorialization occurred in the early 1990s, following the Doi Moi period of economic reform and the period of afforestation and reforestation over deforestation. The last layer of state territorialization began in 2006 as the forestry sector developed toward a more intensive market-oriented model.

Later layers are intended to overcome problems of the previous layer, but also inherited and innovated the existing good aspects. For example, after the first layer in the pre-1980s, a large area of forests was exploited. This led to the transfer of the focus on restoration and rehabilitation in the next period. Another example is the SFEs. Instead of being dissolved, some were transformed into forest management boards and focused on forest protection function. Most recently, when the budget for protecting natural forest was exhausted, the PES initiative was emerged to fill the gap. Consequently, new PES territories have been established on top of the existing forest territories.

We also found out that all territorial strategies are a dichotomy between actors as state vs. non-state actors or villagers; functions as production vs. management, or activities: exploitation/plantation

[8] Nguyen, V.T.H, McElwee, P, Le, T.V.H, Nghiem, P.T and Vu, T.D.H. PES models for collective action outcomes in Vietnam. Journal of Ecosystem Services (under review).

vs. protection. We argue that state territorialization is not a single try but successive. But depending on the period of time or deliberate goals/interests of the Government on forests, the process may diverge or converge (see Table 5) and then resulted in constructing or reconstructing forest spaces.

3.2.6 The politics of territorialization in A Luoi

Moving from the state-centric analysis in the previous section, here we zoom on the particular case of A Luoi, Central Vietnam to examine the politics of territorialization in practice. Over the past half-century, forest landscape, human population and economic livelihood activities in the study area have undergone significant changes, driven by not only external factors like war, state market-oriented economic and resource use policies, but also by internal and historical context. The transformation process involves different actors, including state institutions (such as Forest Protection Department (FPDs), forest management boards (FMBs), or state-owned companies (SFCs), NGOs and especially local villagers participate in the production of forest territories, especially through the implementation of successive state territorial strategies (mentioned in the previous section). We argue that the significant transformation in forest landscape as we see today in A Luoi, and its specific qualities or characteristics, is not only due to the state territorialization from above but also territorialization and (re)territorialization from below. By this we refer to the processes/mechanisms of rescaling that mediate control and access over forest territories and hierarchies and the changing power among actors in forest governance.

3.2.6.1 Territorialization during the War

During the American War in the 1960s-1970s, Southern Republic of Vietnam, Northern Democratic Republic of Vietnam, and the US army divided this area and attempted to integrate Upland communities into allies in war. The forested mountainous valley of A Luoi was hardly a safe haven for anyone. The American military relentlessly raided both the eastern and western sides of the range by sky and ground forces to block an increasingly fluid network of trails transporting men, supplies, and weapons from the Northern socialists to comrades in the South in the struggle against Southern capitalists and their allies (see Figure 7).

Within the battlefield, Huong Nguyen and A Roang allied with Northern Vietnam. "*We were communist allies (đồng minh cộng sản)*" [Interview #3, Feb 2019] since the communist infiltration and insurgency started in early 1960s. As part of the supply strategy for Northern Vietnam, A Roang people moved from Laos to their current place (together with Huong Nguyen people in their old location), to set up the line of Road 74 – one of the five main strategic roads built to assist the Northern Vietnam passing through A Luoi. During this time, the US established outposts and several special forces bases in A Luoi but were forced to evacuate in 1967 and then immediately

resorted to heavy bombing and the use tactical herbicides, including Agent Orange, to inhibit the movement of their enemy under the cover of the valley's dense forests. A non-negligible portion of A Luoi's forests was thus destroyed during the war (Biggs, 2018).

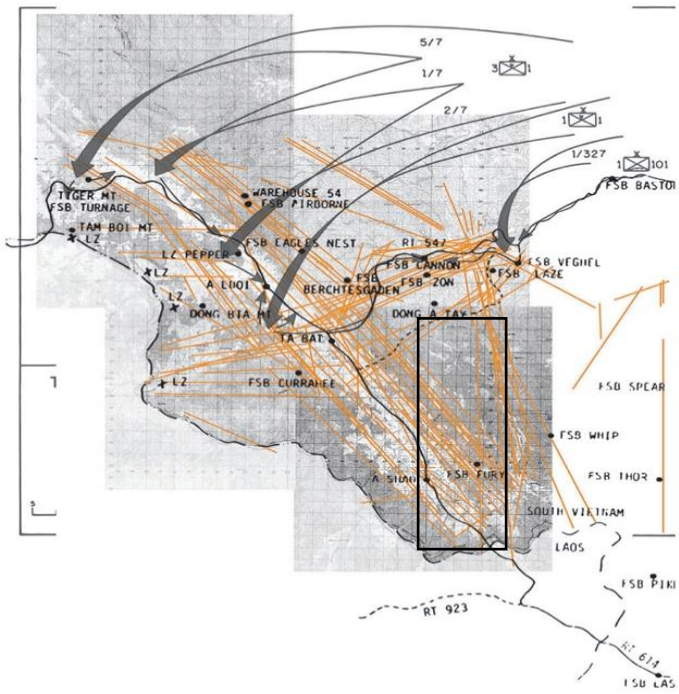

Figure 7 - Map of US military operations and sprayed Agent Orange in A Luoi
(Indicated by orange vectors and our research area in the black square. Source: Vo (2017))

Similar as many other ethnic minorities groups in Vietnam during War time (Nguyen, 2014), people in both Huong Nguyen and A Roang had to leave their homes and lives in the forest, only returning in 1973-1975. However, the choice of place to settle and resettle of both Huong Nguyen and A Roang's people in the war reflected the strong bond alliance between Northern Vietnam and villagers, that both ensure the safety for most of villagers but also help the state to create and maintain their territories within A Luoi's battlefield.

3.2.6.2 Territorialization after the War until 1990s

a. State territorial strategies to control people

A Roang's settlement in 1973

The Ta Oi people in A Roang evacuated there from Sekong province, Lao PDR during war. Six main villages (namely A Roang, Ka Ron, A Ho, A Chi, Ka Lo, and A Min) started moving to the current location in 1973. The only Katu village in A Roang, Huong Son, started moving from

neighboring Huong Lam commune in 1986, also under this government's resettlement program. Their settlement in the current location was thus under the guidance of Directive No.128/TW of 24 February 1959 of the party on strengthening cooperation and improving situation in upland regions. The directive pointed out that shifting cultivation and the living conditions of ethnic minorities were negative factors that restricted upland development process. It was thus essential to actively guide and help uplanders to settle in with the goal to "*appropriately carry out the resettlement step by step, help farmers develop agriculture and handicraft industry, set up and begin organized production to improve their living standard*".[9] Immediately after settlement, villages in A Roang were grouped into state agricultural cooperatives for wet-rice paddy cultivation. Villagers worked as paid labor in the state cooperatives. Irrigation systems were established, wet-rice paddy fields were built, and basic facilities for settled lives (roads, schools, healthcare centers, etc.) were constructed. Villagers in A Roang were called to quit their nomadic lifestyles in order to settle in the new, stable living place. The defense Economic Delegation No.92 (Đoàn 92), a Northern Vietnamese military group, was assigned to directly support A Roang people in the process of settlement and construction of their new home.

Most of A Roang's current paddy land was formed during this period. The official boundary divisions did not consider the traditional culture and production space of the Taoi people. Their residential and agricultural spaces were charted and administered by the national administrative system for the first time in history. The first five villages of A Roang were scattered and isolated from each other in their old home in Laos. But when they moved to A Roang, they were sorted, separated, and mixed up together. Their traditional territory arrangement was dissolved and altered by the new setting that was designed by the State. This is also the reason that the names of A Roang's villages today are the names of two villages combined, such as: A Chi – Huong Son, Karon – A ho or A Min – C9. In this period, paddy land became cooperative property, yet swidden land remained under villagers' control. However, similar to other parts of Vietnam (Kerkvliet 2005), collective farming in A Roang did not work as villagers could not survive on the portion of the harvest they received from the cooperative. This pushed them to rely on their own swidden land growing dryland rice, cassava, and so on. Eventually, with the dismantling of cooperatives in 1986, cooperative paddy land was distributed to households, each receiving an average area of about 1 ha. Households established after this initial land distribution had to build new rice paddies surrounding the village. Wet rice thus became the most important food crop in A Roang. In addition, due to living near the rich natural forests of A Luoi (now A Luoi Protection Forest and Sao La Natural Reserve), forest product collection and hunting were also among the main

[9] The 5th Plenum of the 3rd Party Central Committee (July 1961).

livelihood activities in A Roang. Taoi women also have a traditional weaving profession. This also serves as a source of income for them. Several programs to conserve traditional weaving were also implemented in A Roang by the government and international development programs.

Huong Nguyen's resettlement in 1996

In Huong Nguyen, it was a totally different story (see more in Chapter #5). After the war, Huong Nguyen people returned to their swidden farming and forest collection livelihoods in their old village sites, in marginal, poorly connected locations in the upper Huong Dien watershed. In 1996-1997, however, the villagers were relocated to the new Huong Nguyen in a site along the road from Hue city to A Luoi, to make way for the Huong Dien – A Roang hydropower plant and its upstream reservoir and protection watershed. Their resettlement was shaped by a number of significant reforms to settlement policies, notably Resolution 22/TW of 27 November 1989 and the Decision 72/HDBT dated 13 March 1990. In contrast with previous periods, the resettlement of Huong Nguyen included both direct aid to households and the construction of totally new infrastructure facilities for the community.

The most significant change in the re-settlement policies in Huong Nguyen is that they were integrated with afforestation and forest development policies (the Decision 327/QD-TTg, Program 661 or the Decision No.393/QD-TTg/1996), with poverty reduction policies (the Decision 133/1998/QD-TTg and the Decision 143/1998/QD-TTg), with policies on the development of trade in mountainous and ethnic minority areas (the Decree No.20/1998/ND-CP), and with policies on the development of infrastructure in communes with extreme difficulties (the Decision No.135/2000/QD-TTg); and the Decision No.143/2001/QD-TTg. These new policies were also applied in A Roang as follow-up interventions to create homogeneity among communes in A Luoi district.

The main aims of the resettlement period were to rearrange the population, reorganize production, build a new landscape for ethnic minorities to make them settle, and prevent them from doing shifting cultivation, all of which was thought to contribute to promoting social progress as well as enforcing national security and defense. The goals of the settlement program were to create conditions for ethnic minorities that promote permanent crop fields, village sites and new jobs, all to reduce poverty while protecting forests.

The specific requirements under the decision were that residents must permanently inhabit one area, that at least 80% of their household income should come from stable cultivation, and that the settlement area must ensure peoples' health, education, and food security.

So, after 40 years, the (re-)settlement programs in A Luoi can be considered as interventions by the state to 'zone' people inside the fixed territories. These programs aimed at restructuring the agricultural activities and setting up concentrated settlement villages as in Huong Nguyen and A Roang, and keeping people far away from the forests.

b. State territorial strategies to control forests

In the period following reunifications, like in other upland areas across Vietnam, the State conducted tree surveys and demarcated the areas for logging in the remaining rich natural forest. The forests in A Luoi were considered as 'economic forest'. State Forest Enterprises (SFEs) were established to operate the state-controlled management system and to log timber in the forests commercially (see Figure 8 below). There were three SFEs operating in the Huong Nguyen/A Roang area: A Luoi, Huong Giang and Nam Hoa, under the Department of Forestry at the provincial level. Roads were also constructed in the forest to transport timber to main roads.

However, the operation of these enterprises did not really challenge villagers' traditional claims to the forest due to the abundance of forest resources and the companies focus on timber harvesting. Even when state granted the companies the right to the whole forest around the commune, villager's swidden plots in the forest still continued. "*The logging activity of the SFEs made it easier for us to set up swidden fields because most of the big trees in the forests had been cut down*" [Interview #10, Feb 2019]. Today, each household in both A Roang and Huong Nguyen still has about three to four swidden plots in the forest, totaling about less than 1ha – few ha. However, newly established households with labor constraints often do not have enough land. Land shortage has been major problem for many villagers in both A Roang and Huong Nguyen. Our survey revealed that 15% and 20 % of households in two communes lack land for cultivation, which is one reason for land conflicts observed in the commune.

Collectivization and resettlement were important strategies adopted by the state to control villagers and their forest use practices in Upland regions after the war. For the people of A Luoi, building a new life post-war happened differently. In the spirit of allyship from the war, it was a co-production process between state policies and local desires/practices. "*A Roang's landscape was full of bomb craters. The armies (No.92) and villagers worked together to fill the craters around the village, creating the flat and large rice paddy as you see today*," one elder said [Interview # 170, May 2019]. However, the paddy land was still too small to provide enough rice for the villagers, as one elder recalled. Households in A Roang continued to work on their own swidden fields on the hill slopes surrounding villages, unbeknownst to the SFEs. Due to the poor or non-existent roads, forest exploitation activities mainly served the needs of households.

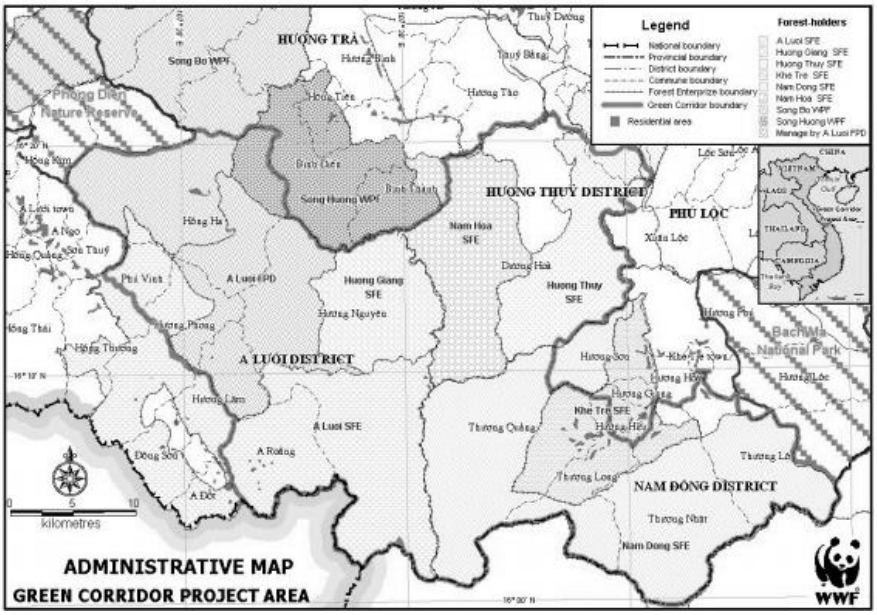

Figure 8 - A Luoi's State Forest Enterprises

(Source: WWF, 2003)

Thus, in contrast to the records elsewhere about conflicts between local people and SFEs (To et al. 2014), according to both A Roang and Huong Nguyen people, they were not excluded from forest uses. "*The forests were full of big trees; we did not have chainsaws to exploit like SFEs. There is no conflict among us. We even could use the harvested forest areas for our swidden fields*" [Interview #10, Feb 2019].

> "*Our old Huong Nguyen was deep in the forest. No road to get there. It took a few days walking from the district center. So, state administrative management did not affect much and the SFEs had not yet exploited to our place*" [Interview #14, Feb 2019].

An elder in the village recalled, "*Dozens of trucks full loaded with timber went out of the forest every day. But the forest belongs to the state, they have the means to exploit it. How can local people like us can exploit such big trees? Anyway, it's still better for the state to exploit than illegal loggers from other regions to come and exploit it*" [Interview #4, Feb 2019].

3.2.6.3 Territorialization in the late 1990s until 2011

Territorialization in A Luoi changed substantially in the late 1990s and early 2000s, a bit late compared with the national trends, as mentioned in the previous section. The lag of policy from the national to the local level, and the conditions of a place recovering from the war, are the main reasons for this, according to the former leader of the TTH Forest Protection Department (FPD). The late 1980s marked a difficult time for the Vietnamese economy and SFEs across the country with the rampant levels of deforestation. In A Luoi, SFEs still maintained their activities even until

2005. However, prominent policies of this period of Vietnam were also implemented here, both in terms of tree plantation/restoration and conservation.

a. The arrival of large-scale restoration programs

A Luoi district (and TTH province more generally) is one of the leading localities in the country in approaching the model of allocating forestland (FLA) to villagers. Over the years, in A Luoi, the provincial authority has paid attention to implementing many policies on allocating forestland to organizations, individuals and groups of households for long-term use, gradually improving and stabilizing the lives of local villagers and contributing forest development. The process began with the District Peoples' Committee establishing a forestland allocation team consisting of members from the district cadastral office, the forest protection department, and the head of the Commune People's Committee. In many provinces in the North of Vietnam, in order to be allocated requested land, households had to meet numerous requirements, including submitting a land-use plan for approval. The land was not intended for food crop production. Once the land request was approved by the head of District Peoples' Committee, households were granted LUCs (red books) that set out their use rights as well as the duties they had to fulfil in relation to the land. In contrast, in A Luoi, the process was easier with the initial goal of reforesting the denuded land, including forest destroyed during war, agriculture, and on forestland impacted by logging. Hence the FLA process of came together with afforestation activities organized by state forest owners, supported by vast development projects of NGOs, and the land allocation program that came with resettlement programs.

The 327 and 661 reforestation programs were the first efforts of the state to rehabilitate the forests degraded by war, to de-collective and devolve the control over land, and to allocate benefit-sharing of forest resources to improve local villagers' lives in A Luoi. Through these programs, it was the first time the villagers learned of how forest plantation activities could bring income for them. The villagers were paid for planting new trees or nursing these areas a few years after that. Table 5 shows the area of tree plantations (mostly acacias) in A Roang and Huong Nguyen under the state-led programs.

Table 5 - Plantation forest areas of the State-led programs in A Roang and Huong Nguyen, 2000 - 2009
(Source: Synthesized by authors from TTH FPD, 2019)

	Area	2000	2001	2002	2003	2005	2006	2008	2009
Program	**A Roang**	**193.75**	**72.27**	**117.53**	**38.78**		**81.63**		
	661						0.23		
	ADB						58.14		
	K92	193.75	72.27	117.53	33.29		23.26		
	Huong Nguyen			**119.45**	**174.86**	**64.52**	**57.16**	**0.28**	**533.39**
	661							0.28	522.39
	ADB						13.96		
	Rubber Plantation Programs					56.79	4.77		
	JBIC			119.45	174.86	7.73	27.38		
	K92						11.05		

However, the strong development and expansion of A Luoi's plantations is not only due to post-war restoration, but also due to the goals and desires of local livelihood development and poverty reduction for Upland people. The local people of A Luoi eke out a meagre existence in a region with one of Vietnam's harsh climate regions for food-crop cultivation. In addition, "*people don't want to buy or eat anything from A Luoi. They fear the effects of Agent Orange remaining here*" [HH Interview #43, March 2019]. It was why no agricultural crops could be grown and bring economic benefits to the people. As one expert mentioned, the Australian acacia tree thus becomes a 'hero' in the A Luoi context: "*the species grows up to six-and-a-half feet per year and after three to five years, can be used to make paper and furniture. The tree also improves the soil and quickly provides the canopy*". The development of the road system since 2005, especially the establishment of totally new road corridor (Ho Chi Minh Highway from A Roang to the south) and the improvement of existing roads (A Luoi – Hue, and Ho Chi Minh highway across A Luoi valley), also contributed to the viability of commercial acacia plantations. These areas have been increasing

dramatically. According to A Luoi FPD (2019), at least 10,000 hectares of production forestland has been allocated to local villagers for tree plantation since the late 1990s.

b. Forest Protection and State-led conservation territory

In contrast to the 'barren' and 'degraded' forestlands which have been strongly promoted for allocation to people for reforestation, the remaining better quality natural forest areas of A Luoi have become subject to strict state-led protection measures, with the support of international conservation programs. World Wild Fund (WWF) is one of them: "*it is impossible not to mention WWF's efforts so far in A Luoi's landscape restoration*" [Interview #4, Feb 2019]. Right after Vietnam participated in the Earth Summit (Rio de Janeiro in 1992) and signed on to the Convention on Biological Diversity, in 1993, WWF - one of the world's oldest international organization, established operation in Vietnam, when it became increasingly feasible and popular for international NGOs to do so (Dang et al., 2012). WWF selected Northern Central Vietnam as its main site.

Along with other activities across 6 provinces of the Central Annamites, since 1999, WWF supported the Thua Thien Hue provincial Forest Protection Department (FPD) to propose the formation of a new 58,000 ha nature reserve in the remaining dense forest in Huong Nguyen - one year after the discovery of a still-alive Sao la (*Pseudoryx nghetinhensis*, an endangered forest-dwelling bovine previously believed to be extinct) in the commune. The aim of this reserve establishment was for the conservation of the Sao la. However, at this time, this area was not included on any government decision or official set of proposals regarding the national special-use forest system (MARD 1997, FPD 2003, cited by Birdlife, 2001), so the idea was not approved.

Among the many initiatives pushed by WWF, one of the most important was the Green Corridor project, which was designed and implemented in collaboration with the Netherlands Development Organization (SNV) and Thua Thien Hue FPD, in the period 2003-2006. Under this project, a lot of research and activities related to conservation were carried out. In 2005, based on the project results, the region was recognized for its important role in protecting downstream water supplies and reducing flooding in the lowlands of Thua Thien Hue province (WWF, 2005). A Luoi SFE was transformed into A Luoi Protection Forest Management Board while Huong Giang and Nam Hoa SFEs were integrated into Nam Hoa SFC. In addition, the project also continued to propose the idea to establish a new nature reserve in "…*the largest areas of lowland evergreen forest remaining in the Central Annamites*" (WWF, 2003), with high priority to conserve threatened species, including the Sao la, the Truong Son muntjac, the Edwards pheasant, the red-shanked Douc's Langur, the white-cheeked gibbon and other species (WWF, 2004). The proposal of the

new Sao La Nature Reserve, therefore, was included into the Vietnam Special-use Forests Planning in period 2006-2020. In 2010, the first complete feasibility report of formation of the Nature Reserve was carried out. The information in the report is based mostly on the results of studies carried out under the 'green corridor' project and WWF's work in the region over time. In 2013, finally, Thua Thien Hue Provincial People Committee (PPC) officially approved the decision No.2020/QD-UBND regarding the establishment of the Sao La Nature Reserve.

After the Green Corridor project, the region was identified as a strategic conservation site of WWF and many other foreign organizations (SNV, Tropenbos, the UN's Global Environment Facility (GEF), the United States Agency for International Development (USAID), etc.) in Vietnam and Southeast Asia. A number of local NGOs established in order to carry out the research/activity contracts for these foreign organizations. Over the past two decades, a succession of forest conservation policies and projects have been designed and implemented in this region. For example, at least 13 forest conservation projects were implemented by WWF in the region, covering a wide spectrum of issues, from biodiversity/species conservation, sustainable forest management, participatory forest management, forest certificates, sustainable non-timber products, PES/REDD+ to landscape-level planning and restoration.

In the line with global trends, community forest management was introduced to TTH from the 1990s onwards. Indeed, TTH province was an early adopter. With the support of international organizations, such as the Program on Forestry (PROFOR Vietnam), SNV, the project to support universalization and training for agriculture and forest upland (ETSO), several areas of natural forests have been piloted and allocated to households, groups of households and communities. However, a longer-term view shows that the state has maintained control over much of the natural forest. By 2011, A Luoi had only allocated over 9700 hectares, accounting for only 12% while the remaining of the district's natural forests were still under the management of state forest owners [A Luoi FPD, 2012]. This data shows the dominance of the state over the natural forests and conservation territory and the role of the local villagers in forest protection and conservation is very lackluster. Also, for these reasons, people no longer consider natural forests as theirs but as state forests. Only planted (acacia) plantations are theirs:

> '*The management and protection of the natural forest belong to the state. So, the state-forest owners should protect these areas. I don't have time to come and protect these forests. I protect and take care of my acacia forests. It's enough for me*' [HH Interview #90, March 2019].

There is no denying the state-led efforts in the making of forest territories in A Luoi over the past four decades. The district can be put forward as an example of 'best practice' forest transition where forests were strongly degraded by the war and then by post-war extraction, before turning around, stabilizing, recovering and eventually increasing in the area (if one includes acacia plantations as ‘forest').

However, a question arose: does the making of forest territories stop? Or are there some new territorial dynamics underlying the glorified forests? The state territorialization of forests for different purposes by drawing boundaries and specifying activities that are allowed or not allowed within these boundaries has demonstrated the state’s attempt to control both local people and forest spaces. The forest and land classification and planning as well as the land allocation program have confined local villagers to certain portions of forest(land) with rigid boundaries in the fields and on the map by land-use certificates system. The state territorialization of forests thus entails restricting the amount of available forestland for local villagers and the range of possibilities available for access forest resources. However, our field-based evidence shows that local villagers sometimes contest or resist the terms under which territories are configured. Social-territorial conflicts emerge aimed at changing or (re)negotiating the distribution of benefits, access, responsibilities, or risks. One could say that another round of territorialization, has thus emerged, co-produced both by local villagers in their resistance strategies and by the state with its new territorial strategy to re-emphasize their control. The politics of territory-making in practice is a never-ending process that has always been marked by contesting, compromising, negotiating, and (re)negotiating. We describe this in detail in the next section.

3.2.7 New territorialization and a bifurcation of forest landscape

In the sections that follow, the data show how the new territorialization has occurred in A Luoi. It happens through two different paths: conservation vs. production. Both paths involve two main actors, the State – the ‘from above’ territory designer vs. local villagers – the ‘from below’ territorial controlled objects. While smallholder plantation forestry has been perceived as the solution to re-greening barren lands and as an alternative livelihood to reduce the natural forest-related activities of local villagers, the boom in smallholders commercial tree plantations has led to increasing tensions in land-use management and pressures to convert nearby natural forests. At the same time, the Government has introduced and implemented several new state-led market-based conservation initiatives, such as PES and REDD+, in A Luoi, which aim to improve the effectiveness of forest protection and provide financial incentives to local villagers to protect natural forest. However, these practices that exclude or include people within specific boundaries and aim to control how others access and use forest land and forest resources within such delimited

territories lead to the next round of territorialization to remake subjects and landscape, The case study below illustrates the stakes and ensuing struggles within and between the forest spaces in A Luoi as part of the never-ending making of territory. All of the processes turn A Luoi's forest landscape into the bifurcated space of transformation.

3.2.7.1 New state territorialization through the PES scheme

A nationwide Payment for Forest Ecosystem Services (PES) scheme rolled out in 2010, arriving in Thua Thien Hue in 2011 and then A Luoi in 2014. By reviewing PES implementation in A Luoi, we argue that it effectively leads to a new territorialization of natural forest areas. PES policies re-emphasize state management of natural forests.

The state led the establishment of the national PES policies, assigning specific buyers/sellers, and regulating fees. Through the scheme, consumers of electricity and water (general public and industries) pays for environmental services like watershed protection and soil erosion prevention through their electricity and water bills, collected by water supply companies and hydropower plants (defined as intermediaries or ES buyers). The money collected from buyers is then distributed through a new state-run institution, called Thua Thien Hue Forest Protection and Development Fund to the owners and managers of the watershed forest areas, to pay for their efforts to protect and ensure the forest areas providing environmental services.

Government Forest Agencies, such as the provincial and district Forest Protection Department, initially surveyed to identify forest areas eligible to provide forest environmental services. They then mapped the eligible forests into different territories of hydropower watersheds. In A Luoi district, PES eligible forests cover around 73,000 ha (or 76.7% of total forest area) in three main hydropower watersheds: Huong Dien – A Roang, Binh Dien, and A Luoi (see Table 6).

Table 6 - Area of PES forest by hydropower watersheds in A Luoi
(Source: TTH Fund, 2019, synthesized by authors)

A Luoi hydropower watershed	16097. 56 ha	22.05%
Huong Dien – A Roang hydropower watershed	28751.96 ha	39.38%
Binh Dien hydropower watershed	28163.73 ha	38.57%

In terms of PES fees, the Government specified the precise price for most payments. All hydropower plants, for example, were initially required to pay VND 20 per kWh (US$ 0.0013 per kWh), which was then increased to 36 per kWh (US$ 0.0016 per kWh) since 2016[10]. By the end of 2019, PES revenue in A Luoi was around VND 28 billion (equivalent to US$ 1.2 million). However, in the first two years of PES implementation (2015-2016) in A Luoi, differences in electricity sales between hydropower plants led to huge differences in the price of PES payment between watersheds. As a result, the People's Committee of Thua Thien Hue province approved an additional payment for forest areas within Huong Dien – A Roang and Binh Dien hydropower watershed. The TTH PPC has been trying to regulate among different watersheds and different financial sources to set only 2 prices of payment: VND 600,000 ha/year and VND 400,000 ha/year. The idea behind that is to ensure that each hectare of forest is now paid to reach the maximum VND 600,000/ha/year (USD$ 26.3/ha/year) and at least VND 400,000/ha/year (US$ 17.50/ha/year), equivalent to other forest protection policies and programs across Vietnam's uplands. This policy, and the evolving structure of payments associated with it, constitutes a form of state territorialization in that it is a very specific, targeted strategy to promote the use of a particular spaces for outcomes designed by the state.

In addition to being demarcated, these forests have been given a new name, "PES forests" (or Rừng cung ứng dịch vụ môi trường, in Vietnamese) to distinguish them from other natural forests that are not within the hydropower watershed.

a. New state institutional arrangement for PES

The provincial government has taken advantage of existing state forest management institutions to design PES governance systems, delineate regulations, and comply with identified actors. Different state agencies within the state system, such as the Forest Protection Department and local authorities, have been assigned new tasks and roles through PES. The creation of new state institutions within the forestry sector, as the Thua Thien Hue Forest Protection and Developmet Fund (FPDF), and athe new Forest Protection Task Force (lực lượng bảo vệ rừng chuyên trách), who carry out the forest protection activities professionally under work contract, together with pre-existing forest protection department (kiểm lâm), can also be considered as adaptations to make PES work. PES also creates more opportunities for local villagers in natural forest access through participating in forest protection activities and getting payments. In short, the PES scheme leads to an increased presence of the State at the local level and local people in state activities. Figure 9 below shows the PES institutional setting in A Luoi.

[10] Decision No. 147/2016/ND-CP

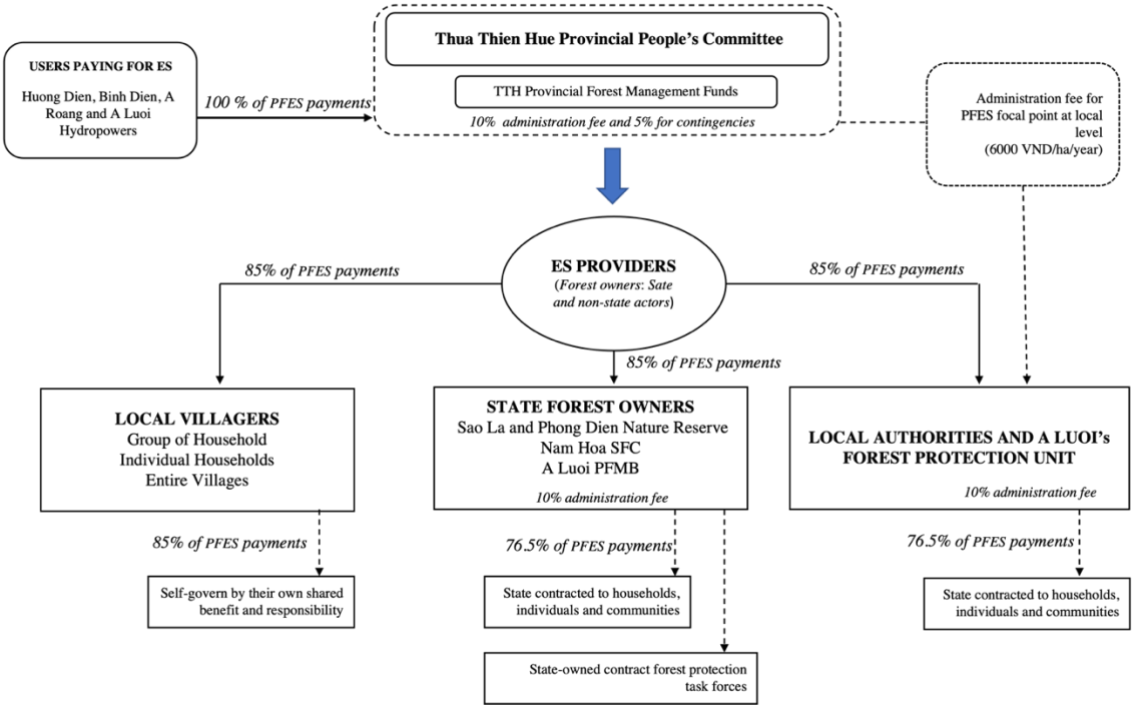

Figure 9 - PES institutional setting in A Luoi

(Source: by author).

The TTH Fund is in charge of fee collection. The fund then distributes PES revenue among forest owners/managers in A Luoi, after keeping 10 percent to cover managerial costs and 5 percent to cover contingencies. Within the watersheds designated as PES eligible, forest owners and managers are identified as direct beneficiaries whenever they have a land-use certificate (Red-book) conferring tenure and user rights to forests. Up to now, there are four big state forest owners (Nam Hoa State Forest Company, A Luoi Forest Protection Management Board, Phong Dien Nature Reserve, and Sao La Nature Reserve) managing 54,000 ha or over 74% of the area; and 288 other forest owners, most communities, groups of households and individual households, managing 12,510 ha, or 17%, benefitting from PES. Around 6400 ha or accounts a little under 9% of PES forests in the district, has not yet been allocated, but is under the management of local authorities (like the communal people's committee) and the A Luoi forest protection unit.

At the same time, the government representatives who take charge of forest management at the local level, including local authorities (communal People's Committees) and the A Luoi Forest Protection Unit, also play new roles as local PES focal points. Their new task is to support the TTH fund in making payments to local forest owners (especially households and groups of households), managing local forest owners, and monitoring and evaluating the effectiveness of forest protection annually so that the Fund can make annual payments.

Why can PES be considered as a new state territorial strategy to maintain control over natural forests? As noted earlier, previous research suggests that PES deflects attention from the weakness of the forestry sector, generate new funding for the sector's survival in the face of enduring budget shortages, and to maintain/expand state power to forest resources (McElwee, 2012; Suhardiman et al., 2013; To & Dressler, 2019). This is supported by empirical data from A Luoi, as outlined below.

First, PES is selective. The design of PES results in it being implemented in ways that largely benefit state forest institutions, helping to maintain the state's control over the more important forests. As noted earlier, nearly three-quarters of PES forests in A Luoi are still under the management of state forest owners. Under PES, these areas have been subjected to stricter protection regulations, restricting human activities such as cultivation, logging, and NTFP harvesting. According to villagers:

> *"We used to go to A Luoi PFMB forest to get rattan, but now they manage it much more tightly. A forest control station was established near our village to control who goes to their forest and gets what".* Or *"like Nam Hoa, they are a timber extraction company. They don't have a protection function, and their forest is also a production forest. Still, they also have a forest protection team and strictly apply forest protection regulations"* [FGD #10, May 2019].

In some cases, the state forest owners contract local people for protection purposes and use PES revenue to pay them. But under this contractual arrangement, the rights of the local people for access and control over the forest are minimal, "*I thought participating in PES protection can benefit not only from payments but also from NTFPs under the canopy. But they said No*" [HH interview #150, May 2019].

Second, the state forest owners, under PES, do not just the forest management agencies on behalf of the State on the ground, but also play their new role as public ES providers. They still work regularly to protect the forests entrusted by the state but receive a new financial payment. According to A Luoi's state forest owners, *'PES money helps is a lot to strengthen our forest protection force'*[Interviews, Feb 2019]. Since 2017, state forest owners in A Luoi established their own contracted forest protection task force (name Lực lượng bảo vệ chuyên trách). PES revenue is used for that purpose. The original PES policy intended to push more a model of local management of forests through allocating and contracting forest protection responsibility to local villagers. However, the new invention tends to reverse and take back the control over PES forests. The state forest owners use PES money to contract full-time professional forest protectors and pay them a monthly salary and social insurance or make up for the financial shortfall of the state budget in its

salary policy. For example, Nam Hoa SFC has nearly 50 forest protection contracts; A Luoi MB has 57 while Sao La NR, in addition to their forest rangers, has 30 forest protection contracts.

b. Some revival of community territories under PES

The previous section shows that PES is just 'old wine in new bottle' (bình cũ rượu mới) of a state-centric territorial strategy to maintain its primary control over the most important forests (cf. McElwee, 2012; To & Dressler, 2019) . However, there is another process going on in parallel, though it is small and slow. It is the transfer of power management from the State to local villagers over natural forests. This was initiated under the support of international NGOs three decades ago but has taken off again under PES. Recent data shows that the area of forest allocated to households and community has doubled after nearly 7 years of implementing PES, and there are still potential areas are waiting for allocation (A Luoi FPD, 2019).

Table 7 – Size of PES community territories in A Roang and Huong Nguyen, in hectares
(Source: TTH Fund, 2019)

	Plantation Forests	Natural Forests		
		Rich	Medium	Poor
A Roang				
Communities			0.23	434.3
Individual Households			1.18	51.2
Huong Nguyen				
Community			13.9	96.78
Individual households	5.89			0.62
Groups of households				916.75

The PES community-based forests in A Luoi have been organized in different forms, allocated either to an entire village, to groups of households or to individual households. For example, in Huong Nguyen, under the Forest Allocation Programs by A Luoi district, as part of the readiness phase for PES, nearly 1100 ha of natural forests which used to belong to A Luoi PFMB, were allocated to 22 groups of HHs (with on average 10-12 HH per group). The authority used groups

rather than the entire community because clans remain the strongest social ties, particularly in land-sharing practices in Katu people. Small groups among intimate family members, kin and neighbors were anticipated to result in higher uniformity, consensus, and preferences of group members. For this reason, and also because the Katu people are the main group in A Luoi, 79% of the PES community-based areas is currently managed by groups of households (TTH Fund, 2019). The path taken in A Roang is different. As the social setting of the Ta Oi people is village-based, the forest areas allocated to them are mostly allocated to the village as a whole (see Table 7).

However, the forests allotted to people are all poor forest areas (see Table 8), and "*are areas of dispute and very high risk of deforestation*" [FGD #1-8, 2019]. As several representatives of forest protection teams shared at the annual meeting of multistakeholder participation in forest protection in Huong Nguyen:

> *"The forests allocated to us are very poor. We are unable to do anything or get direct benefit from it. The payment is not worth much while the responsibility is big. The forests are at high rich of encroachment by our villagers and illegal loggers. This requires us to spend our time to patrol at least several times per month if we really want to do a good job. At the same time, forest rangers always force us to protect otherwise they will take back the forests. I find forest protection is very difficult*".

The further situation and the effectiveness of these community-based PES models are examined and discussed in detail in the next chapter (Chapter #4) in this thesis.

3.2.7.2 Territorialization from below through the smallholder acacia plantation booms

The forest transition in Vietnam relies mainly on the expansion of monoculture exotic forest plantations (Cochard et al., 2020). This is clearly observed in A Luoi, especially Huong Nguyen commune. When we arrived in 2017, we encountered a place in the throes of a commercial plantation boom, with the dominant sight of acacia (*Acacia auriculiformis X mangium* hybrid, or *A. mangium)* over the landscape. In contrast to old stereotypes of many other upland regions across Vietnam (Sowerwine 2004, Clement 2008), in which one would expect them to be characterized by a complex mosaic of swidden fields, bushes, young trees, and natural forests, Huong Nguyen has given way to a more compartmentalized landscape. Acacia plantations have popped up near people's houses and intercropped with rubber or cassava covered many of the sloped around the commune. Statistical data for nearly 10 years from the A Luoi Forest Protection Unit also shows the dominance of acacia over other forest tree plantation areas, such as pine and rubber, in the district at least until the end of 2015 (see Figure 10). Described as an anomaly (Sikor, 2012), the expansion of commercial acacia plantations that we observed in A Luoi is led by local villagers,

not by commercial enterprises or state institutions as is common elsewhere. In the next section, we use the case of Huong Nguyen commune to describe in detail the role of villagers in making this territory (also see more in Chapter #5 and #6).

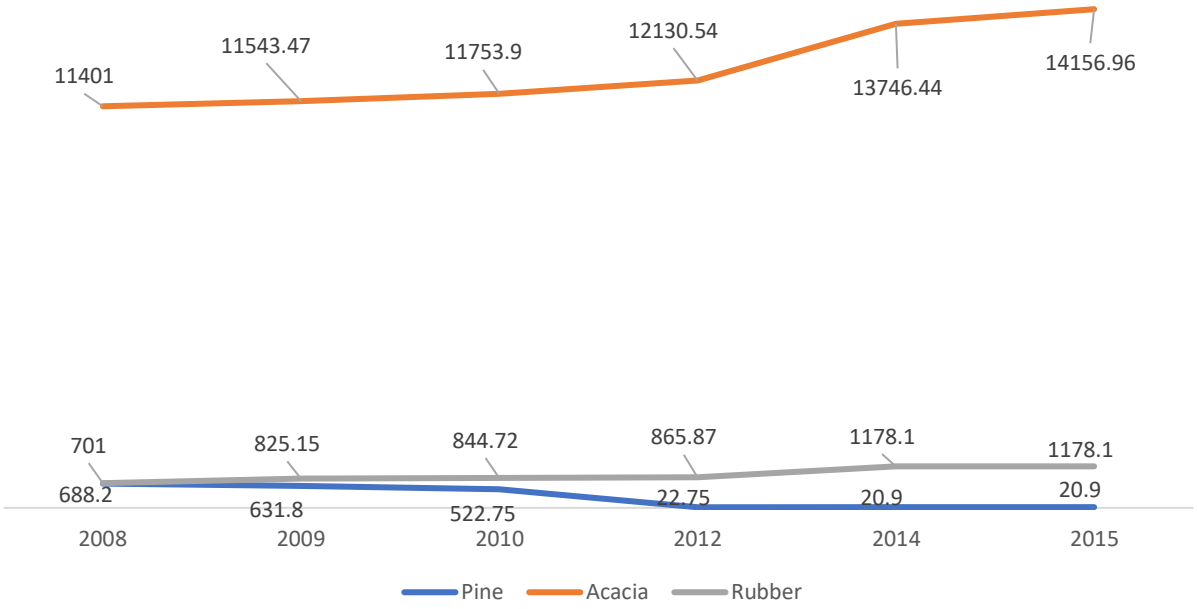

Figure 10 - Changing plantation forest areas by species in A Luoi, 2008 – 2015

(Source: A Luoi FPD, synthesized by authors)

a. Huong Nguyen's acacia boom: state-led origins

Huong Nguyen is the largest commune in A Luoi, accounting for nearly 30% (32.590 ha) of the total district area [A Luoi FPD, 2019]. As a result, the district authority considers Huong Nguyen as a place with an abundance of land resources for developing forestry economics. Except for the large area of natural forests under the management of state forest owners, until 2006, nearly 40% of the total commune area was still classified as unused or barren land (CRD, 2006). Tree plantations thus were initially promoted by state-led forest policies and interventions to effectively use land resources, re-green these areas, and foster livelihood development.

Acacia (as well as other species) were first introduced in Huong Nguyen through the first large-scale tree plantation program – Program 327, with support from the A Luoi State Forest Enterprise (now A Luoi Protection Forest Management Board) in 1996. It was followed by other state-led reforestation programs, such as Program 661 in 1998 and Decree 147 about improving natural and planted forests in 2007. These interventions sought to engage villagers in acacia plantation, through land-use planning for tree plantations, land-use certificates, distribution of seedlings and fertilizers, and even subsidies of labor costs. For example, 34 ha of forestland surrounding villages were designed and allocated to villagers to plant trees, 75% acacia and 25% cinnamon. A Luoi SFE even

employed villagers on short-term contracts or food-for-work programs to participate in acacia tree plantation.

However, despite the technical and financial incentives, villagers were initially not interested to participate in acacia. The evidence is that, from 1997 until the end of the 2000s, the acacia plantation areas in the commune did not increase much. Locals called acacias a 'valueless tree (cây vô giá trị) because they did not see particular economic nor environmental interest in it at the time. The total area planted in Huong Nguyen under the state-led reforestation programs was reported as over 1110 ha at the end of 2009, but most of this area (96%) was on the state forest owners' land. Only 34 ha, as mentioned before, was planted on the villagers' allocated forestland (Thua Thien Hue FPD, 2019).

b. Huong Nguyen's acacia boom: bottom-up momentum

The situation changed dramatically over the last two decades. From perceiving acacia as a 'valueless' tree for re-greening barren land, villagers came to appreciate it and then invested massively in commercial acacia plantations. The rapid expansion of smallholder acacia plantations in Huong Nguyen is even beyond what the Government planned. According to one A Luoi official interview (2019), the actual acacia area controlled by villagers is even higher than official data. Acacia has been replacing all other food crops (rice, corn, or cassava) and occupying all available lands, not only the government-designated zones but also home gardens, along canals and roadsides, and with dramatic implications for livelihoods and land management. The issue has become to be debated with respect to sustainability in land-use change, land access and control, and sustainable forest development in all levels, from communal, district to provincial and national level. The 'nightmare of overreliance on mono-crop exotic Australia acacias plantations' (McElwee 2016: xii) cannot be solved easily, due to the high motivation and desire of local villagers toward acacias.

All farmers expressed an interest in planting more acacia during the interviews, for different reasons. The economic rationale to undertake plantations is clear (see Figure 11). The average income currently is 30-40 million VND (US$ 1300-1700) for harvesting one hectare of 3-year-old acacias. In addition, the labor wage for planting, nursing, or harvesting acacia pays around 200.000 – 250.000 VND/day (US$ 9-14/day).

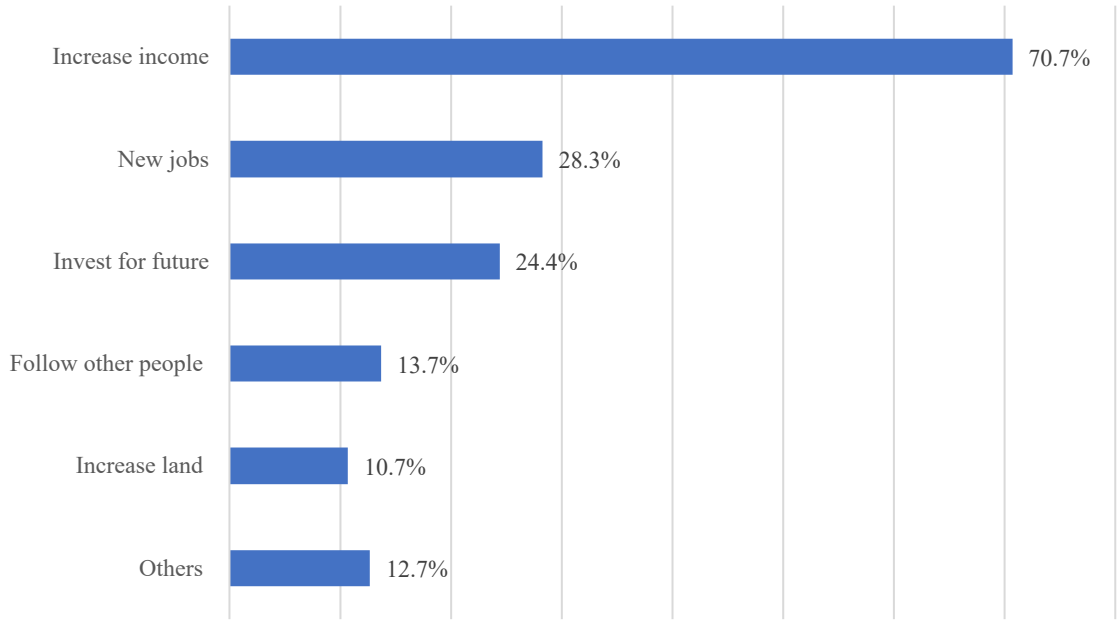

Figure 11 - The reasons local villagers participate in acacia plantation in Huong Nguyen
(Source: by authors)

In addition investing their own funds, local people also took advantage of support from state-led policies and programs and development programs to build their own acacia production territory. These supports include financial help, land access, seedlings, fertilizers or even infrastructure like roads (see Table 8).

Table 8 - Significant policies and intervention influencing the expansion of smallholder acacia plantations
(Source: by authors).

Programs	Year	What local people get?
Program 661 (and Huong Nguyen Resettlement program)	1996 – 1997	Acacia seedlings Land-use certificates for 34 ha (average 1 ha/HH)
JBIC reforestation program	1999	Labor cost for planting nearly 100 ha acacias of A Luoi Forest Management Board Free acacia seedlings to plant in local villagers' fields.
Program 135 – Socio economic development of the most vulnerable communes in ethnic minority and mountainous areas in Vietnam	2001 – present	Acacia seedlings and fertilizers Acacia production road system

The Greater Mekong Sub-region program funded by Asian Development Bank (ADB)	2006-2009	Acacia seedlings and fertilizers Acacia production road system
Smallholder Rubber Plantation Program	2003-2005 2007-2008 2010-2014	Land-use certificates (for rubber fields but mixed with acacia) and loan program for agricultural development (mostly used to invest in acacia fields).

The villagers' desire to earn cash through acacia plantation is shown through their interest in road building to acacia plantation zones. Specifically, Program ADB (see Table 3), which financed rural development was driven by villagers' acacia desire:

> *"Instead of other supports for each household, we collectively proposed to the project to build more roads connecting to our production area. They can requisition part of our lands to build roads. We are voluntary. Because convenient roads will help our acacias get higher prices" [FGD #5, April 2019].*

The acacia boom in Huong Nguyen shows that those local villagers were inspired to join in the highly commercial commodity production process initiated by the government. By not resisting but indeed a very proactive involvement from below, local villagers in Huong Nguyen are key actors producing these 'acacia' territories. It is a territorialization process from below by local villagers. In contrast to the CFM under PES, where the villager role is less powerful, in the tree plantation case, the villager role has a strong influence at the landscape scale.

The acacia boom also led to a new frontier of land dynamics (see Chapter #5). Within just two decades, villagers gained control over much of the village's collective land. They became owners of acacia farms, which most called 'my acacia forests' (rừng keo của tôi). While individual parcels are small, together they account for nearly 13,000 hectares (A Luoi FPD estimated) and are the largest commercial tree plantations in Huong Nguyen and A Luoi.

These dynamics pose challenges. When most collective village lands had been grabbed, villagers started to encroach into nearby natural forests. Figure 12 below, drawn by villagers, identifies the high-risk area for encroachment (see the black arrows). The villagers are now hungry for land. They have thrown themselves into the land hunt and intensified competition with each other, and resist government regulations and their own traditional customary tenure to gain access and control for each piece of land for expanding acacia plantation. And more than ever, it also begins to help us identify an battle between forest spaces, between conservation and production, between natural forests and plantations, between villagers, and with surrounding state forest owners.

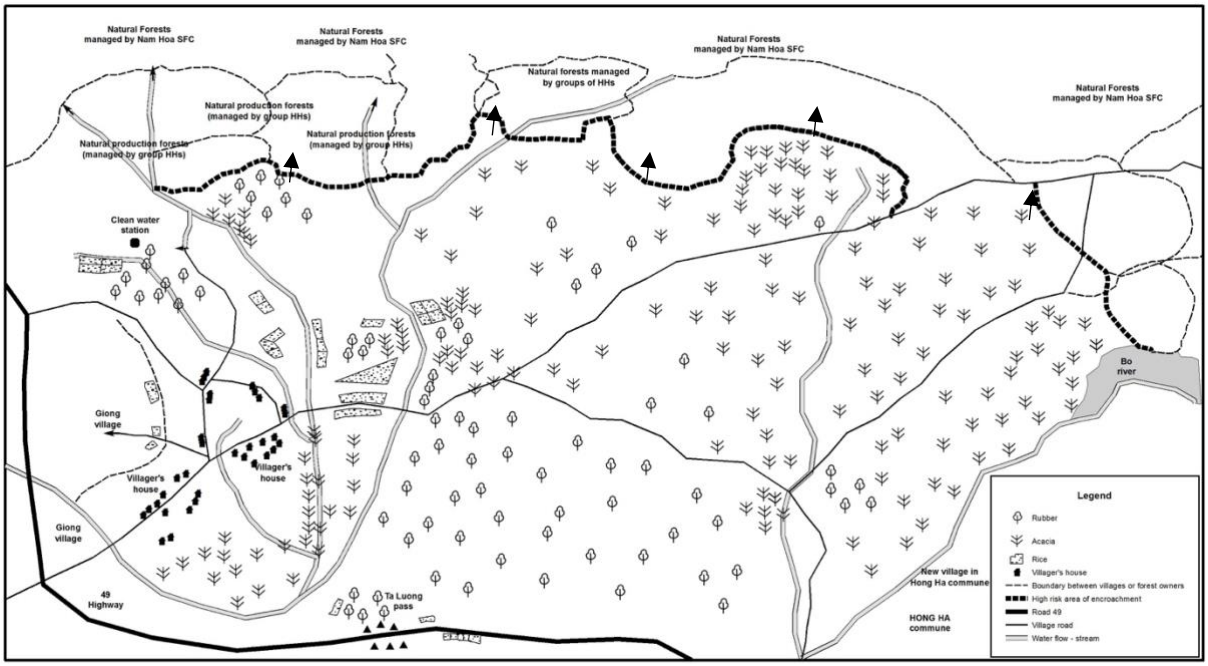

Figure 12 - Sketch map of production area of one village in Huong Nguyen, notably highlighting high risk areas for encroachment into natural forests

(Source: by villagers; redrawn by authors, 2019).

3.2.8 Discussion and conclusion

In sum, the paper focuses specifically on the transformation of forests and people over nearly three decades in A Luoi District in Thua Thien Hue Province in central Vietnam, which has a long history of state intervention and conflict over forests. The piece demonstrates some key points theoretically and empirically.

*Firs*t, the notion of 'territorialization' has provided a useful lens for us to shed light on the shape of forest transitions. A FT is not just a spontaneous increase of tree cover, but rather the 'landscape of forest space production'. We argue that the process is not straightforward. Instead, it embraces diverse changes in agencies, power relations, and mechanisms that led to forest changes in every single forest parcel along the curve. It started with the monocentric central state management over forest spaces. This period of enclosure was followed by phases of partial opening up of spaces with the participation of non-state actors, especially local people, through devolution and decentralization. At first, the State still maintained its control over mostly natural forest spaces, with some re-arrangement of state agencies (such as the transformation of SFEs to MBs or emergence of Forest Funds for PES) to align with the ideas of forest conservation and reforestation as well as to access new financial funding sources. The State only allowed full devolution to non-state actors, especially local villagers, in degraded forestland or barren hills in post-war landscapes, for natural regrowth and tree plantations to increase forest cover dramatically.

This opening space created favorable conditions for what we called ‘from below’ territorialization through the revival of PES community forests and expansion of smallholder acacia plantations in the last decade. Local villagers are key political actors who have produced or reproduced forest frontier spaces where new forms of land use, land access mechanism, and property tenure related to acacia emerged. It is totally a new process enacted from above by the state and meeting not with resistance, but instead with proactive and collaborative reactions from below. The new territorialization process is adding new layers to the previous from above state territorialization.

The process is linked to what Sikor and Lund (2009) discussed about the enclosure process when state rules provide ‘enforceable’ claim and power to non-state actors, especially local villagers, to leverage by access to set a claim to control land and resources in practices. The real shape of FTs in practice is shorthand of all the Government's successive territorial strategies, co-constitute with the reactions of local villagers from below along the implementation of these strategies to shape/reshape every single forest space over time. These layers may start at a different time during history, but their legacies and components persist in operating in the next layer. They alter, blend, or intersect with each other and form an overall conjuncture/trajectory of will and strategies by multiple actors to reconfigure upland forest spaces and constitute a deliberate forest transition. The state’s deliberate strategies and institutions have a predilection for management through abstract space, establishing and enforcing strict boundaries of resource control and use. In contrast, local institutions are managed through complex spatial arrangements, using overlapping and flexible boundaries of use and tenure. When state management space is asserted, it is often to exclude, or at the expense of, local spatiality, thus creating bifurcation among forest spaces and turning them into the frontier, full of contraction, adaptation, and hybridization. The various reactions from below and local contexts as we showed through the case in A Luoi play very important role on shaping the process as a whole and then generating differentiated impacts and variegated, unexpected outcomes.

Reading FT pathways through the lens of territorialization and politics of territorial making allows us to explain the range outcomes at local level. This new understanding is crucial, particularly if actors seek to promote, replicate, or to channel the FT process in more sustainable way (e.g. toward balancing among environmental conservation and social justice and economic development).

Second, taking different approach also allows us to gain new knowledge about the FT pathways and drivers. The forest scarcity situation due to high rate of deforestation in the 1980s (Meyfroidt & Lambin, 2008b) led to the decisive role of successive state policies/interventions, themselves shaped by Vietnam’s particularly trajectory of socio-economic development and broader governance and structural transformations (Dao and Yasuyuki 2017). These include plantation

development, re-categorization of forests, tenure reforms, and enhancing natural forest generation (Cochard et al. 2020). Through the implementation of these state-led measures, plus through influence of globalization and commodity markets (cf. Kull et al. 2007), the FT curve also has the active engagement of numerous stakeholders exercising agency, especially local villagers in promoting small-scale tree plantations in specific embedded in rural development contexts (Meyfroidt and Lambin 2008; de Jong 2010; Sikor 2012).

The common pathway approach of FT literature is good at identifying the main driving forces. But they also can be simplified or neglect the mechanisms by which these forces shape particular outcomes on the ground. Those mechanisms, as we discussed in the paper, are the 'co-production' territoral strategies by different actors. Tracing the successive state territorial strategies over time also reveals that the production of forest territories in Vietnam has been shaped by not only the state but also spins to local villagers from below. The process is still dominated or started by the State and its institutions from above, but has started to open some spaces for the participation of local villagers. This also reflects a gradually stronger power with local villagers vis-à-vis government in contemporary Vietnam. The outcomes of forest changes in practice, as we argue, depend highly on the way in which these two actors interact with each other.

Third, the paper highlighted the nature of a bifurcation of forest spaces in contemporary Vietnam. The two examples of the implementation of the new PES market-based forest protection policy, and the flourishing growth of smallholder acacia plantations are used to illustrate this claim. These two halves are expected to converge to help achieve a range of the deliberated government goals. However, local conditions and realities have been causing them to diverge.

PES really brought a breath of fresh air and changed the local forestry governance system. It not only helps to strengthen the role of the state on the forest areas they have been managing but also opens up opportunities for people to participate in forest management and protection. However, the low payment associated, the novelties in the implementation organization, and the strict protection requirements have been causing adverse effects. PES still cannot provide sufficient conditions to attract the active participation of villagers. Although the PES initiative opens up opportunities for people's participation, governance capacity to carry out new tasks and the cost-benefit balance is problematic. This greatly affects the effectiveness of PES implementation as well as forest management and protection in practice. This even has challenges that exacerbated underlying problems surrounding natural forests or even created new conflicts (see more in Chapters #4 and #6 in the dissertation). In the forest protection territory, it reveals that the 'co-production' in PES territories between State and villagers is still very weak and divergent.

In contrast, the plantation forests territory is another story. The process started with state-led interventions on reforestation and restoration of post-war landscapes 30 years ago. However, together with other dynamics of market forces, local aspiration to development, and the embeddedness of tree plantation initiative into local livelihood practices, the large areas of forests and forestland have been transformed into smallholder plantation farms. In this case, local villagers are key political actors, that have produced or reproduced forest frontier spaces where new forms of land use, land access mechanism, and property tenure related to acacia emerged. It is a territory-making process initiated from above by the state, meeting no resistance but instead very proactive and collaborative reaction from below to 'co-produce' smallholder tree plantation territories as we see today.

In Vietnam, accelerated processes of conservation, extraction and commodification are pushing actors to assert control over forestland territories, re-shaping forest landscapes at a variety of scales into divergent forms of conservation or production territories. Multiple actors, with different goals, discourses, visions and behaviors drive these spatial strategies to re-configure resource access, control and management. It is a unique time and place where critical elements and relations converge to exert a formative influence on people's lives and futures – a moment that (Li, 2014: 4) calls a conjuncture. The bifurcation of forest transition may also be characterized as a zone of 'compressed space and time', where changes are rapid, intense and hyper-connected (Mahanty & Milne, 2016). In which, the battles among these forest territories through actors' agency (the will of state vs. reactions of non-state actors, especially local villagers), political perspectives in defining actions to control and use of resources (conservation vs. market-based production), and then behaviors in practices (plantation expansion vs. deforestation maintenance) have been emerged or exacerbated day-by-day.

Last but not least, our work also raises crucial questions about the 'sustainability' of forest transitions. Does any increase in forest cover represents 'good news'? For whom and for what reason? Are livelihoods based in PES contracts or in booming smallholder commodity production sustainable? Are the claims to land and forest resources (and the regulations of forest usage resulting from various layers of territorialization) 'sustainable' in their outcomes, are they good for biodiversity and ecosystem services, are they good for rural lives and livelihoods? What trade-offs do we have to face, and how do choices make today influence the forest transition into the future? They are further questions and concerns that from findings we would like to call for greater attention, from both researchers and policymake

CHAPTER 4

Fixing state territory, but opening ground? A market-oriented PES policy and the transformation in forest conservation

4.1 Preface

This chapter contributes to answer part of research question 2, the sub-question *to what extent have forest protection efforts, especially the newly market-oriented Payment for Forest Ecosystem Services policy, transformed forest governance in practice, especially focusing on the role of power and institution arrangements?* This chapter builds on the historical policy context in the previous chapter, consists of a first-author paper and is complemented by the findings of two other papers in which I participated during my doctoral studies, and which are joined to this thesis as Appendix 1 (McElwee et al. 2020) and Appendix 2 (Cochard et al. 2020). The present preface briefly introduces the full set of papers and findings, which together allow me to contribute to fostering better PES outcomes in practice, both in forest governance effectiveness and in ensuring social safeguards such as secure tenure, cost-benefit justice, and dealing with forest-related conflicts.

Global conservation discourses and practices increasingly rely on market-based solutions to revalue and manage natural resources. Among these, Payment for Ecosystem Services (PES) is considered an efficient and effective means to improve rural livelihoods and conserve forests. Vietnam has had a national PES policy in place since 2010, which transfers money for forest protection activities from water and energy users to forest protectors, including state institutions and households who live in upland watersheds.

Implementing market-based conservation initiatives like PES in a forestry sector dominated by state institutions required incubating a new institutional framework. Vietnam's PES is considered an interesting case of evolutionary transition when the market-based idea was nurtured and developed within the womb of the state institutions. PES design and implementation in Vietnam differ strongly from the theoretical ideal and have become a unique case in which the Vietnamese state institutionalized the new market-oriented initiatives to maintain state control over forest and people.

The previous literature on PES in Vietnam provided a very pessimistic view that PES can reverse forest devolution, and also argued that it will result in uneven access to forest resources, particularly between state agencies and local people. State forest owners (e.g., protected areas, forest management boards, or state-owned forest companies) in many provinces have refused to share PES benefits and used associated regulations as a new tool to strengthen their control and exclude local villagers from forests. However, my dissertation provides a counterargument to this, based on the empirical data of PES implementation in A Luoi and my experiences through engaging in PES policy research as an NGO staff member since 2015 in 11 different provinces implementing the national PES program.

What I found is that Vietnam's PES program can be considered as a new state territorialization strategy. The Vietnamese Government, supported by several international donors (e.g., USAID, GIZ), took a leading role and exercised their power in (i) surveying, identifying, and mapping ecosystem services (ES); (ii) issuing policies on PES, assigning specific buyers/sellers and fixed fees; (iii) taking advantages of existing state forest institutions to design PES governance systems; and then (iv) delineating regulations and enforcing compliance with the identified actors. The market's role in negotiations and transactions has therefore almost been eliminated and replaced by state-designed regulations in a shift of power on forest governance. PES policy then has been 'translated' through the existing forest governance systems. where it converges with and attempts to influence local forest practices. Going beyond the arguments that the state is seeking to maintain control over vast natural forests, I find that PES's form in practice has also been influenced by active engagement and agency of regional government actors and local payment recipients. New values of forests under PES, as well as its financial revenues, have brought power to new actors, especially local villagers, within the existing forest institutions, leading to changes in property systems, political jurisdictions, rights, and social contracts (see Chapter #3).

Building on the above context introduced in Chapter #3, in the present section I go further into the transformation of power relations in forest governance system and institutional arrangement under PES. This takes place in three papers. The first is a paper to which I contributed (McElwee et al., 2020, see Appendix 1), entitled *"Hybrid outcomes of payments for ecosystem services policies in Vietnam: between theory and practice"*. This paper investigates PES policy at the national level and local level (including A Luoi). It shows how different actors contest the formulation and implementation of PES to gain control over PES forest governance and funding distribution.

The second paper, for which I am first author, and which constitutes this Chapter #4, zooms further into the participation of local villagers in forest governance, with particular focus on the effectiveness and justice of PES implementation. Among a rainbow of PES practices in Vietnam, I selected the case of community-based forest management - one of the six main forest management modes in Vietnam, as the main research objective for the paper. Using the data from A Luoi and the results of a survey that I lead in collaboration with PanNature, a Vietnamese NGOs and other research teams from Hanoi National University, I argue that the PES are neither failures nor unadulterated successes. They did influence local people's behavior and institutions. However, a range of challenges remain.

PES policies have changed local forest governance institutions, influenced the individual behaviors of local actors, and enacted 'top-down' command and control regulations for protecting forests. Policies have completely ignored local customary institutional arrangements and capacities and

force community ‘cohesion’ to achieve collective action based on the views of the government. Consequently, these arrangements work differently than intended. They have led to diverse, complex, and unpredictable outcomes on the ground. In some places where local customary institutions are strong, local villagers are willing to participate and protect forests whether or not they received payments. Other places suffer from a collective action dilemma – making it increasingly difficult to get consensus among group members and between groups, leading to conflicts. This leads to forest exclusion, not between outsiders and insiders, but among kin and neighbors who share common histories and social interactions. It also leads to new tension surrounding the participation, property, and access to resources in these forests.

A third paper (Cochard et al. 2020; Appendix 2) entitled “*Vietnam’s forest cover changes 2005 – 2016: Veering from transition to (yet more) transaction*”), for which I am co-author, also contributes in part to the discussion of PES policies. Notably, one of its findings was that PES in practice has had mix-match outcomes and overall, a minor influence (though not negative) on natural forest cover. This contrasts with the expectations of the Government, which saw PES as an innovative mechanism to secure new sources of investment and financial instruments for protecting the vast of remaining natural forest and then increasing the total forest cover.

Overall, in bringing together the insights of these three papers (Chapter #4 and the two papers in the Appendixes), I argue that the institutional priorities and local values thus that have shaped PES policy and implementation in Vietnam have led to a hybrid model, full of contradictions and compromises, that neither fits a classical definition nor resembles neoliberal conservation outcomes, and whose success is difficult to judge. The effectiveness of PES policy on whether these natural forests can be protected or not will certainly have a big impact on whither Vietnam's forest transitions in the future.

Table 9 - Publications relevant to the Chapter

Publications relevant to the Chapter
Main paper (chapter text): **The challenges of collective PES: Insights from three community-based models in Vietnam** *Authors: Nguyen Thi Hai Van (NHV), Pam McElwee (PMcE), Le Thi Van Hue, Nghiem Phuong Tuyen and Vu Dieu Huong* ***Authorship Statement**:* Corresponding author: NHV. In detail: Research idea: NHV, PMcE Research design: NHV Data collection: NHV, in collaboration with others Data analysis: NHV, PMcE, in collaboration with others Writing paper: NHV, PMcE, in collaboration with others Revising paper: NHV, PMcE Overall lead effort: NHV ***Status:*** Submitted to Ecosystem Services date 31 March 2021 Reviews received (Major revisions): 28 August 2021 Resubmitted after Revisions: 27 October 2021
Co-author paper (Annex 1): **Hybrid Outcomes of Payments for Ecosystem Services Policies in Vietnam: Between Theory and Practice** *Authors: Pam McElwee, Hubert Bernard, and* **NHV** *Authorship Statement:* Co-author In detail: Research idea: PMcE Research design: PMcE Data collection: PMcE, HB and NHV Data analysis: PMcE, HB and NHV Writing paper: PMcE, HB and NHV Revising paper: PMcE, HB and NHV Overall lead effort: PMcE ***Published*:** Development and Change, October 2019. https://doi.org/10.1111/dech.12548
Co-author paper (Annex 2): **Vietnam's Forest cover changes 2005 – 2016: Veering from transition to (yet more) transaction** *Authors: Roland Cochard, NHV, Ngo Tri Dung and Christian A.Kull* *Authorship Statement:* Co-author

In detail:

Research idea: Cochard

Research design: Cochard

Data collection: Cochard, NHV and NTD

Data analysis: Cochard

Writing paper: Cochard

Revising paper: Cochard, NHV and others

Overall lead effort: Cochard

***Published*:** World Development, November 2020

https://doi.org/10.1016/j.worlddev.2020.105051

4.2 Paper

The challenges of collective PES: Insights from three community-based models in Vietnam

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4.2.1 Highlights

- Collective PES experiments have emerged from earlier, mostly unsuccessful, community forestry models in Vietnam.
- These PES models mostly focus on strengthening forest protection regulations and providing monetary subsidies, but do not yet create conditions for local institutional capacities in collective action success.
- Models that combine individual household benefits (mostly financial) with additional community and collective benefits (such as microcredit funds or carbon rights) are likely to be most successful.

4.2.2 Abstract

Vietnam has adopted a national Payment for Forest Ecosystem Services (PES) policy, which while mostly paying individual households for forest protection, has been flexible enough to allow for collective PES models to also arise. Such collective models have the potential to reduce transaction costs, avoid motivation crowding, and protect common-pool resources like community forests. This paper analyzes three different types of collective PES models that have been tried in Vietnam: community land titles and PES payments to whole villages; group titles and PES payments to collections of households; and collective patrolling with contracts but without land tenure rights. We draw on fieldwork across three provinces to examine how these different forms of collective PES have arisen, and how they have articulated with existing forest governance institutions and local social characteristics. We also assess what the advantages and disadvantages for each model are. Overall, we argue that none of Vietnam's collective PES models have achieved unqualified success in generating positive collective action outcomes, and each has challenges that have undermined group efforts, exacerbated underlying problems, or even created new conflicts. Based on our assessment, it is likely that achieving a mix of individual (primarily financial) benefits together with collective rights and benefits is important for both social cohesion and forest protection, thus improving existing local institutional capacities and reinforcing group cohesion to achieve collective action success are needed.

Keywords: Collective action, community-based forest management, Payment for Ecosystem Services (PES), land tenure, Vietnam.

4.2.3 Introduction

Payments for Environmental Services (PES) initiatives have boomed as a supposedly more efficient and effective means to improve environmental conservation and development (Pattanayak et al., 2010), and a range of programs have been designed for carbon sequestration, biodiversity conservation, and watershed functions worldwide (Pagiola et al., 2005; Gómez-Baggethun & Ruiz-Pérez, 2011; Muradian & Rival, 2012). In theory, PES was primarily designed around voluntary participation of individual landholders (Wunder, 2005; Southgate & Wunder, 2009), yet as PES has been adopted globally, real-world arrangements have expanded to also include collective agreements. In these cases, resource users, such as groups of neighbors, kin, or an entire community, collectively participate in PES and agree to limit or change their shared use of resources in exchange for a reward (cf. Murtinho & Hayes, 2017). These collective and/or community-based PES arrangements have become increasingly common worldwide and present several possible advantages.

First, land in the rural global South is often managed under long-standing common property regimes; thus, collective PES models provide a potentially better fit with the common-pool nature of resources being protected (Kerr et al., 2014; Barnaud et al., 2018; Hayes et al., 2019). Second, collectively altering behavior and complying with resource-use restrictions in exchange for a (collective) payment has particular appeal in reducing transaction costs incurred by working with large numbers of individuals in low-density and scattered populations (Kerr et al., 2014; Murtinho & Hayes, 2017; Hayes et al., 2019). Third, collective PES models also show promise in harnessing locally appropriate norms and social sanctions to avoid problems of motivation crowding (Kerr et al., 2014; Rode et al., 2015); for example, strong community governance characteristics make it more likely that individuals will conform to expected PES requirements (Hayes et al., 2017; Hayes et al., 2019), although such collective mechanisms might also increase free-riding (Kaczan et al., 2017).

Yet despite many advantages, questions still remain about the outcomes of these models in practice, given that PES financial incentives that were designed for private property may not necessarily promote collective action (cf. Poteete & Ostrom, 2004). Extensive work on common property over the years has pointed out challenges, including heterogeneity of communities, as barriers to collective action (Agrawal & Gibson, 1999). Yet the literature on PES devotes little attention to comparing collective PES's relative effectiveness in heterogeneous settings as compared to individual benefits (Kaczan et al., 2017), although there are indications of potentially more cost-effectiveness if barriers can be overcome (Narloch et al., 2017; Moros et al., 2019). How PES should or can incentivize collective action and the models and modalities for doing so (e.g., in cash,

in-kind, through land tenure or other rewards, etc.) remains an open question (Narloch et al., 2017; Kerr et al., 2014).

The activities to be incentivized by PES can include development of collective institutions and procedures for operational rules (e.g. who has access to resources, what actions may be taken or not taken to safeguard ecosystem services, other limits on user behavior, ways, and means for obtaining compliance (cf. Ostrom, 1990)), but few collective PES programs have been examined for how they help fulfill these tenets (Barton et al., 2017; Sattler et al., 2015). In cases where communities have been actively involved in program design, PES outcomes have often been more positive (Rawlins & Westby, 2013), and the need for PES programs to pay attention to equity and legitimacy among participants apply equally, if not more so, to collective PES (Leimona et al., 2015). For example, Hayes et al. (2017) found in Ecuador that rule making and enforcement that was considered legitimate by the community was indeed important for accepted and successful implementation of PES, perhaps even more important than the financial incentives. One additional way in which PES can 'piggyback' onto existing effective common pool management systems may be through linkages to collective property rights. For example, when PES contracts are signed with collective landowners, they have already worked out rules of access and enforcement that then might be successfully 'transferred' to the PES activities, such as in Ecuador and Mexico's national PES programs (Hayes et al., 2019; Pfaff et al., 2019; Murtinho & Hayes, 2017).

Vietnam provides a unique setting in which to explore a number of models of where collective action is taken as part of benefit sharing in PES. A national law in place since 2010 generates on average US$ 120-130 million per year for forest protection in 5 million hectares of uplands, accounting for 66 % of natural forests across the country (VNFF, 2020). However, while the national law provides general guidance for the program, each of the 44 participating provinces has the right to decide on their own benefit distribution mechanisms, leading to multiple local collective action models, given that there is some sort of collective forest management arrangement in 70% of PES-participating provinces (PanNature, 2019, 2021)[11]. These range from communities with collective forest land title receiving community-wide PES payments; organized kin and clan groups managing forests to receive payments; communities without land titles providing collective patrols for protection of state forest lands and paid collectively; and other combinations. This diversity provides an opportunity to compare different collective PES models for how variation in social and ecosystem services outcomes might arise and why, and how models may or may not conform to

[11] The data results from a nationwide survey led by the first author (NTHV) in collaboration with Center of People and Nature Reconciliation (PanNature, www.nature.org.vn) to collect data related to Vietnam's community-based forest management in 28 provinces during 2018-2019 and keep updating with 10 provinces until October 2021.

principles to generate collective action outcomes (Ostrom, 2000; Poteete & Ostrom, 2004). To date, no studies have specifically looked at the different collective PES models in Vietnam despite considerable attention to PES in general (Pham et al., 2014; To & Dressler, 2019).

Through research on several local case studies on collective action, defined as group effort and action in pursuit of members' perceived shared goals or interests (cf. Barnaud et al., 2018), we find that each of the models has emerged from a hybridization of PES practices with customary and communal forest use practices in Vietnam. These models have been expected to meet the state's objectives of improved forest management institutions while providing social cohesion and economic benefits for local communities. Yet our research finds that the current collective PES arrangements are primarily aimed at reducing transaction costs, rather than empowering communities, and community benefits remain elusive for many. Low PES payments, coupled with limited sharing of information and decision-making authority within communities, have troubled the collective PES schemes. Communities have been unable to establish collectively acceptable rules, defined benefit sharing, or conflict resolution arrangements, creating challenges for positive collective action outcomes, lessons that have relevance for other areas of the world attempting to organize collective PES.

To make these arguments, we first contextualize the emergence of collective PES arrangements in Vietnam and describe the methods we used to understand the three different collective PES models. Our research with communities reveals a number of problematic issues, particularly in terms of tensions between individual versus collective benefits and effectiveness of collective action outcomes. In the discussion, we focus on several factors, including financial benefits, tenure security, and group features that appear to most affect collective action outcomes, and provide some recommendations to improve collective PES models in Vietnam and globally.

4.2.4 Study Site

4.2.4.1 History of communal forest management in Vietnam

Both collective action and PES policies have been influenced by Vietnam's history of forest management. Traditionally, different ethnic communities and local villages classified forests based on their cultural and social values, and governed different forms of common property through long-standing community institutions, which often combined individual/family rights to forests with group oversight and rule to keep land within the community (Andersen, 2011; To, 2013). Yet after the Democratic Republic of Vietnam (DRV) was founded in 1954 in the North and national unification with the South in 1975, the State formulated grand plans to use collectivization as a strategic tool (Kerkvliet & Selden, 1998). These fundamental changes transferred authority over

land and forests from local villagers to a collective production system under state control, leading to erosion of local and community control (Sikor & Apel, 1998; Bui et al., 2004), tensions over forest resources with the state, and a drastic decline in Vietnam's forest area (To, 2015; McElwee, 2016).

After *Doi Moi* (Renovation) policies in 1986, emphasis shifted to de-collectivization and devolution in the forestry sector (McElwee, 2016). Large areas of forestland previously controlled by the State were transferred to non-state actors, mostly individual households, who were provided with Land-use Right Certificates (LUC) (also known as Red Books (*sổ đỏ*)). Each forest user was given clearly defined and exclusive rights to exchange, transfer, inheritance, mortgage, and lease (Nguyen et al., 2008; To, 2013). During this process, communal tenure was mostly ignored and consequently, this privatization process replaced some remaining customary systems (Ironside, 2017).

Yet despite these changes, in many places customary laws and communal tenure persisted, especially in highland areas where the vast majority of Vietnam's ethnic minorities live, and the state focus on individual household forest allocation was inconsistent with these systems; some communities even refused to accept individual LUC rights (Sikor, 2001; Sikor, 2004; Hall et al., 2011; To, 2013). A number of donor-supported models for community-based forest management (CFM) emerged (Sikor & Lund, 2009), and a revised 2003 Land Law formally recognized communities as legal land users for the first time. By the end of 2019, around 8% of total forestland had been officially allocated to communities (MARD, 2020).

Currently, CFM models are quite diverse in their origins and management forms (see Table 10). In terms of *structure*, some involve an entire community, while others form smaller user groups (e.g., 10-20 households), some of which may involve relatives or clans and in other areas unrelated families with different ethnic origins. In terms of *management approach*, CFM models have included legalizing traditional use rights, while in the early 2000s in the Central Highlands, communities were allocated forests for protection and sustainable commercial logging. However, due to a subsequent State logging ban in natural forests since 2011, this approach was impossible to implement, and many communities received and protected forests but cannot financially benefit from them. In terms of *land titling and tenure*, some CFM models have allocated forestland to communities with collective land titles, including the five rights promulgated by the Land Law, while other CFM models focus on participation in forest management through contracts with state forest owners (To & Tran, 2014). These different CFM models have created an institutional mix that converges old and new, formal and informal systems, giving rise to collective 'tenurial bricolage' (cf. Cleaver, 2000). In this institutional mix, collective action dilemmas (cf. Ostrom

1990) can arise when members of groups are unclear about what they have "*rights to and what they merely have access to*" (Sikor & Lund, 2009: 2).

Table 10 - Different types of CFMs in Vietnam

(Source: Synthesized by authors and PanNature, 2019)

Classification based on	**Different types of CFMs in Vietnam**	
Structure	An entire village	Household groups (10-20 HHs)
Management approaches	Traditional customary system	Newly designed CFM for sustainable commercial timber exploitation.
Land titling	State formal Land-use Certificate (LUC), or Red-books	Not land title but under forest protection contracts

Accordingly, there have been mixed results from these CFM arrangements in practice (Sikor & Nguyen, 2011; Pinyopusarerk et al., 2014; Nguyen et al., 2015; Moeliono et al., 2017). Some models built on customary systems have achieved consensus participation among villagers in design and implementation with good results (Phan, 2020). In other areas, local villagers have treated allocated community forest areas as open access with negative consequences and deforestation (Tran & Sikor, 2006; Sikor & Nguyen, 2007; Tran, 2020; Tran, 2020). Many local communities could not fully realize the rights given to them in law, and these legal tenure rights were insufficient compared with previous customary systems. In other cases, forests that were given to communities were of poor quality, with little investment and unclear guidance on how forests should be rehabilitated or benefits from forest management realized. Thus, CFM models have looked to PES as a possibility to bring new financial incentives to encouraging participation of local communities in forest protection and to improve local livelihoods.

4.2.4.2 The rise of PES collective arrangements

Decree No.99 in April 2010 by the Prime Minister established a PES program for the first time in Vietnam which allows for payments for five different types of ecosystem services. The policy also identified 'service buyers' – hydropower plants, domestic water suppliers, tourism companies and others. Fixed payment rates were established in the original law and have since been revised upwards in 2018. PES payments go to service providers who own, maintain and/or protect forests, including state organizations; communities and/or group of households; or individual households. The national PES policy also allows each province to be proactive in their own PES design and implementation to reduce transaction costs.

As a result, collective arrangements have emerged in 28 of the 44 provinces implementing PES (PanNature, 2019). These build on models inherited from the previous CFM approaches, including

entire communities (Model 1) and kin, clan, or neighbor groups with collective forest land title for managing forests (Model 2) (not all CFM forests receive PES, however; see Table 11). In addition, a third collective PES model has emerged, where communities or groups of households receive PES money collectively through collective forest protection contracts but without land title. In other words, the payees are third-party beneficiaries, and the legal landowner (a state organization) 'passes through' the PES payment (Model 3). This model has arisen given that large areas of natural forests (76% of total natural forests) are still under the management of state forest owners (MARD, 2020). Overall, PES revenue is supposed to become a new financial source to mobilize and increase motivation to participate in collective forest management, support community development (VNFF, 2017; Duong & De Groot, 2018) and build long-term sustainable CFM (Nguyen, 2020).

Table 11 - The models for collective PES in Vietnam

(Source: synthesized by authors and PanNature, 2019)

	Allocated forest areas (ha)	**Of this, forest areas under PES (ha)**	**Percent of this type of forest area involved in PES**
Entire village with land title (also known as Model 1)	1,281,617	323,592	25.3%
Group of HHs with land title (Model 2)	19,096	13,858	72.6%
Groups of HH with contracts (Model 3)	39,809	39,809	100%

4.2.5 Methods

The authors conducted fieldwork in different provinces of Vietnam (Thua Thien Hue (TTH), Kon Tum and Lam Dong) (see Figure 13) in different time periods (2011-2014, 2016 and 2019-2020), aimed at understanding local conditions under which different PES models were designed and implemented over the past 10 years. In Kon Tum, the province has implemented forestland allocation and piloted a model of sustainable community forestry through distribution of official land-use titles since the 2000s, and since the late 2010s, has pursued potential financial incentives for this model from PES and REDD+. The case in Kon Tum was selected to represent for model 1 (entire village with land title). Thua Thien Hue (TTH) is known as one of the first provinces piloting community-based forest management since 1995 but has experienced strong pressure from smallholder acacia plantation expansion, such that policymakers have increasingly turned to a new PES model using groups of households comprising kin or neighbors who agree to provide

collective protection of forests. Thus, TTH case is represented for model 2 (group of HHs with land title). Lam Dong was one of the two first provinces that piloted PES in Vietnam; however, due to very little devolution of forest land to local households and communities, third-party forest protection contracts, but no land tenure certificates, are the most dominant approach. The case in Lam Dong, therefore, represents for model 3, third party contracts (also see Table 11 again).

In each site, we employed mixed methods, including in-depth structured survey interviews with 264 households, focus group discussions (FGD), and participant observation with communities involved in PES (see Table 12 and 13), as well as interviews with stakeholders directly involved in PES governance (e.g., district forest department staff, village heads, etc.). The households selected for survey were chosen by random sampling from the household census lists in each surveyed village, in which every *k*th household was chosen for interview (*k* was based on target sample size which varied in each province). In each village, the surveys reached around 15-25% of the total population to ensure representativeness. The household survey was developed based on preliminary assessments and field-tested ahead of time for clarity by all authors. The surveys were administered in 2011-2012 in Lam Dong (carried out by PM, TPN, HTL and HDV) and in 2012-2013 in Kon tum (carried out by VTHN), while the survey in Thua Thien Hue (TTH) was carried out more recently in 2019 by VTHN as part of her Ph.D. research. Shorter follow-up visits in each province have occurred since the surveys as well as for information updates across the three locations.

Focus group discussion were held with village leaders and selected small groups (for example, the elderly, women, and different ethnic groups). We discussed with village heads how to select participants to ensure the representatives of all key groups participating in forest management in each locale. These smaller meetings were held near the end of the household survey to capture: (i) general histories of resource use to determine how villagers set up institutions for managing forests, how these institutions functioned at different times, and how local institutions interacted with official forest policies like PES; and (ii) cross-check some general key findings from the household survey. Participants were notified about 1-2 days in advance and voluntarily participated, joining at a convenient time (such as lunchtime or in early evening) at the village meeting hall to ensure villagers' participation.

All survey interviews and discussions with respondents were conducted face-to-face by the researchers, mostly in their houses for the survey, and community meeting hall for FGDs. We clearly stated our institutional affiliations as separate from government offices who maintained the PES schemes, and our university affiliations in particular were seen by respondents as clearly focused on research, helping to ensure comfort of respondees. We followed institutional

requirements for ethical conduct and obtained approval from our universities, the Institute of Geography and Sustainability (University of Lausanne), Rutgers University, and Vietnam National University, Hanoi. All respondents were provided with an informed consent summary document, to which they gave oral consent for voluntary participation. No subjects refused to take part in the survey or the FGDs, although some selected households for the survey were not available and were substituted with another randomly selected household. In addition, confidentiality for interviewees was included in the informed consent approach. Field notes were made by hand and not recorded to ensure safety and limit the possibility of concerns by informants. In this paper, we also use pseudonyms to ensure confidentiality.

In our analysis of data, in order to understand the nature of collective PES arrangements on the ground, we paid attention to factors that can affect perception/behaviors of individuals as well as collective action outcomes, including history of the villages; heterogeneity among households within groups (age, ethnicity, education or economic levels); changes in forest management and the evolution of communal tenure; the role of local customary institutions; and local forest use and livelihood practices. However, because our interest was in the institutional forms of PES in practice and the social and collective action outcomes, we did not try to evaluate the program's effectiveness on forest conditions independently, although we did ask in stakeholder interviews about the perceptions of forest changes. In addition, the use of a case-study approach here also does not allow for teasing out cause-effect relations between PES model types and the outcomes, calling for further research on these aspects.

Table 12 - Site information for case study provinces

Sources: Nguyen, Q.T, 2011; Lam Dong Fund, 2020; MARD, 2020; Kon Tum Fund, 2017 and 2020, TTH DARD 2016, TTH Fund, 2020.

Province	Total Forestland (ha)	Forest cover (%)	Type of forest (ha)		Forest ownership (%)					Primary local perception of drivers of deforestation and degradation	PES area (ha)	Number of PES beneficiaries					
			Natural Forest	Plantation Forest	State forest owners (SFOs)	Army	CPC [12]	HHs, groups of HH and Communities	Others			SFOs	Non-SFOs	CPC or District Forest Protection Units	Individual HH contracts	Communities (Groups and entire villages)	Third-party contracts
Lam Dong	539,364	54.5	455,226	84,138	70	14	2	1	11	Cash crop (coffee) expansion, illegal logging	320,97	30	65		1517	6	13742 HHs and 33 villages
Kon Tum	621,079	63	547,803	73,276	70.6	0.9	14.4	8.9	5.2	Cash crop (cassava) expansion, NTFP collection	387,78	23	-	74	5137	26	1523 HHs, 160 groups of HHs and 156 villages
Thua Thien Hue (TTH)	311,206	57.37	211,373	99,833	57.63	1	18.19	22.6	0.58	Small-scale acacia plantation expansion illegal logging and encroachment	153,95	9	-	4	295	282	23 HHs, 29 groups of HHs and 4 villages

[12] Communal People's Committee (CPC) or local authority

Table 13 - Summary of methods across study sites

Province	Districts/Communes	Total villages surveyed	Number of HH surveys	Number of FGD	Number of stakeholder interviews	Time period of work
Kon Tum	Hieu Commune, Kon Plong district	4	100	4	20	2011-2014 2016, 2020
Thua Thien Hue	Huong Nguyen Commune, A Luoi district	4	90	4	27	2019 - present
Lam Dong	D'ran Commune, Don Duong district Da Chais commune, Lac Duong district	5	74	5	25	2011, 2012, 2014

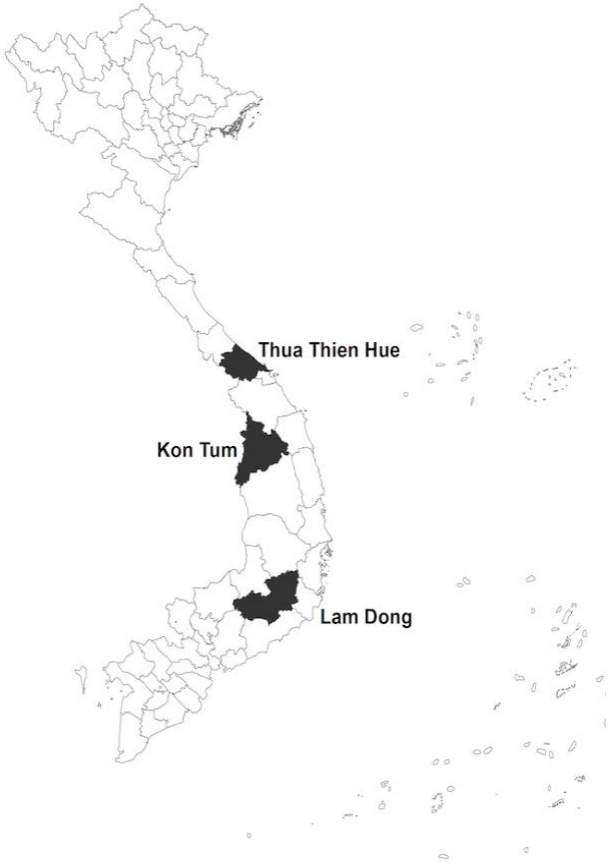

Figure 13 - Location of field sites
(Source: by authors).

4.2.6 Results

4.2.6.1 Three models of collective PES

We discuss below how PES has been incorporated into CFM at the local level, using Ostrom's (1990) set of collective action principles for well-established rules, laws, and relational processes to examine the outcomes: these include setting clear boundaries for the resource and resource users; use of local knowledge; local networks that actively build trust and make decisions; environmental monitoring coupled with processes for feedback; and mechanisms for conflict resolution (cf. Saeed et al., 2017). Additionally, we review different socio-economic factors and contexts, such as the size of groups and forest tenure regimes, and local conceptions of equity in benefit-sharing.

a. Model 1: Community Forests and Collective PES in Kon Tum Province

Hieu commune is located in an isolated valley in Kon Tum province and is the traditional home of the M'Nam ethnic minority people[13]. In 1995 a Forest Land Allocation Program (FLA) began in which State Forest owners assigned forests to individual households with protection contracts of no more than 30 ha/household. The participants received payments of 60,000-100,000 VND/ha/year (4-5 US$/ha/year) to protect the contracted areas and prevent outsiders' use of the forests. The local villagers also received permission to harvest timber and NTFPs for home consumption. Yet these individual HH contracts created a new concept of individual rights, which did not fit with the collective rights in the old customary system (Nguyen, H.V 2014).

Later, a new CFM model was piloted in 2007 with support from JICA (Japan International Cooperation Agency) to revive the collective customary system to both protect forests and gradually improve villagers' livelihoods. The entire village would collectively hold a land-use rights certificate, receive a share of the revenues from sustainable commercial timber exploitation, and 5% of forestland could be used for swidden cultivation. However, in reality, local authorities did not allow villagers to convert forest land for cultivation and no commercial timber extraction was carried out, so the model was considered a failure (Nguyen, H.V 2014).

In 2011, a new project called "REDD+ Community Carbon Pools" implemented by Fauna and Flora International (FFI), began to try again to transfer legal tenure rights for 18,700 ha forest from State agencies to local villagers collectively and to recognize customary norms and rules, with the hope to produce carbon credits in the future. To pursue communal land titling, FFI undertook various preparatory activities, ranging from participatory land use planning, forest inventory and allocation, community forest use and management regulations, and the establishment of forest protection management boards and benefit sharing mechanisms. However, at the end of the project in 2014, only one village had formally received a land tenure certificate, while at the same time, strict rules to avoid deforestation and forest degradation were already in place. In order to maintain the motivation for local people to participate until they get carbon certificates, the project paid forest patrol teams in 11 villages 200,000 VND/ha/year (8-9 US$/ha/year), equivalent to the price of a carbon credit in the voluntary market as of 2013-2014. The payment continued in 3 villages after 2014 with additional support from a new KfW10[14] project, and will continue until 2021, at which time they expect they will be able to sell carbon credits. In addition to this NGO project

[13] M'Nam are also known as Xo Dang, and one of the 54 officially recognized ethnic groups in Vietnam. Approximately 61.8 percent of the national Xo Dang population resides in Kon Tum province, where they comprise 24.4 percent of the province's total population. Source: Vietnam General Statistics Office (GSO), 2020.

[14] KfW10: The project on protection and sustainable management of forest ecosystems in the wider Central Highlands regions, Vietnam, funded by the German Development Bank.

revenue, since 2014, the national PES fund has paid further monetary benefits of 460.5 million VND per year ($20,000 US$) for 1,008 ha. All of these PES revenues are pooled into community funds which have their own benefit sharing mechanisms (see below). Two additional villages received collective land use certificates, or Red Books, in 2019 and should receive PES payments by 2021.

In order to receive the forest protection funds, all households of the village need to sign a forest protection agreement with the NGO project (first FFI, now KfW10), the local authority, and the provincial PES fund to confirm their desire to participate and commitment to comply with all regulations. One CFM board in each village has been set up, voted on by household representatives. A professional forest protection team was also selected, with 18 members voted in, who are trained and paid a monthly salary (1.1 mil VND/month/person, or 48 US$/month/person). Once or twice a month, the team conducts patrol activities with 8-10 rotating members [interview, 2020]. 10% of the remaining pooled PES funds will be used for village microfinance funds for collective purposes (e.g., village meetings or cultural events) and assisting poor households in obtaining loans of up to 7 million VND/HH (300 US$). Any remaining money will then be divided equally among all household members. The average household share of the collective PES scheme received in 2019 was 1.6–2 million VND (70-87 US$), accounting for on average only around 5-6% of yearly household income, according to our household survey results. The majority of income for local livelihoods comes from wet rice cultivation, commercial cassava cultivation, firewood and non-timber forest products (NTFPs) collection from the community forests (cf. Nguyen, 2014; McElwee et al., 2017). The recent boom in industrial cassava and commercial NTFP harvesting have enticed the M'Nam people in Hieu commune to expand their cassava production areas and over-harvested NTFPs in these community forest areas (cf. McElwee et al., 2017; Nguyen, H.V, 2014; To et al., 2016, 2017). These activities can be considered as the main threats for forest protection efforts.

b. Model 2: Group Forests in Thua Thien Hue Province

Our second case study is Huong Nguyen commune, Thua Thien Hue province, where the local community, mostly Katu people[15], was resettled in 1996 as part of the government's policy to move swidden agriculturalists out of protected forest zones in a hydropower watershed and closer to infrastructure like roads. The commune is quite small with only 4 villages (348 households), 34% of which are classified as poor and near-poor (Huong Nguyen CPC, 2019). Livelihoods combine

[15] Katu people (also Co Tu) are one of 54 ethnic groups in Vietnam. About 102,551Katu people who live in eastern Laos (in Sekong province, along the upper Sekong River) and in the Central Vietnam (in Quang Nam and Thua Thien-Hue provinces) (Source: GSO, 2020)

crop cultivation (rubber and acacia plantation), livestock husbandry and limited off-farm work with remittances from individual household members who migrated to work in urban areas. A forestland allocation program in 1997 provided support and incentives to plant mostly acacia trees, leading to changes in access and control of forests. The nearby forestlands were enclosed into private claims by individual households by reclaiming through forest land allocation (legally) and encroaching (illegally) to expand farms. A boom in smallholder commercial acacia tree plantations has led to increasing tensions in land-use management and pressures to convert nearby natural forests, including group forests (Nguyen & Kull, in press)[16].

In 2011, as part of the implementation of PES, local people were allocated nearly 1,100 hectares of natural forests which used to belong to A Luoi State Protection Forest Management Board, with official land-use certificates given to 22 groups of HHs (with on average 10-12 HH per group). The groups were organized rather than the entire community because clans remain the strongest social ties, particularly in land-sharing practices, so small groups among intimate family members, kin and neighbors were anticipated to result in higher uniformity, consensus, and preferences of group members. Additionally, in the context of new income opportunities offered by industrial acacia expansion, individually allocated forests were seen as at risk of being converted into acacia.

The groups were formed on the basis of voluntary registration among members, who manage a forest area of 40-50 ha. In each group, the leader is often the head of a clan or elected by members, and acts as a representative, coordinating activities and distributing benefits among members. Depending on the group, some patrol their allocated plots every 2 weeks, some only once a month, while several others have never patrolled. Group rules related to forest management, which detail local activities allowed, have not yet been discussed in many groups or between groups. Further, only 63% of the commune's population is participating in these groups. The remainder that do not participate are often those who do not have enough labor, such as the elderly or single mothers, households who work far away from the locality, and villagers who did not register because they were busy with other livelihoods (as in commercial tree plantations) and did not expect to receive payment from forest protection.

Each participating household in our survey received on average ~1.8-2 million VND per household/year (78-87 US$/HH/year), accounting for 12-13% of yearly household income. In some groups, PES revenues are divided equally among members while in other groups, different benefit sharing mechanisms are in place. During the year, the group PES funds are usually retained in a bank account for interest or will be lent to members when needed. In addition, the legal security

[16] Nguyen, V.T.H and Kull, C.A. Land acquisition through bricolage? Politics of Smallholder Acacia Plantation Expansion in Upland Central Vietnam. Journal of Peasant Studies (under reviewed).

of the group's land-use certificates has encouraged household members to mobilize PES revenue and external investment for planting rattan or other medicinal plants in group forests. This has helped bring about not only enriched forest quality but also new income sources for the future. The local authorities have also requested that each group contribute 1 million VND/group/year (45 US$) to contribute to the local microfinance fund in order to obtain more collective benefits for the entire commune.

c. Model 3: Third Party Contracts and Group Patrolling in Lam Dong Province

Our final case study is from 2 communes (D'ran in Don Duong district and Da Chais in Lac Duong district) in Lam Dong province, which is the traditional home of the K'Ho people.[17] Forests have played an important role in the cultural identity of the K'Ho, but the devolution process of forest management to local communities has been nearly non-existent in Lam Dong, accounting for only 3% of the province's total forest area, while the rest remains under state ownership (Lam Dong Fund, 2020). Thus, collective PES has required third-party forest protection contracts in this province. Groups of 8-12 households, who tend to live near one another or were relatives, are led by a group head (*to truong*) and sign a formal yearly contract with state forest owners (such as National Parks or Watershed Forest Management Boards) and agree to regularly patrol the specified area, prevent forest fires, and report outsiders. For example, one contract we inspected specified the group head (Mr. Thien), the forest area to be protected (246.5 ha), the location of the forest, a list of households in Mr. Thien's group, and the total amount paid to the group per year (400,000 VND/ha in 2011 x 246 = 97,040,000 VND). No land tenure rights are conferred with these contracts, and violations would void the agreement, including not carrying out required forest activities or degradation of the assigned forest due to failure to report violations. Breach of contract would be met with denial of PES funds for a specified time depending on the seriousness; however, for any deforestation of more than 1 ha or loss of timber greater than $5m^3$, the group would lose their contract, which would then be assigned to another. Such cases have been rare, however.

Groups were both self-organized and selected by the contracting state forest owner in different places. For example, Bi Duop National Park selected which communities on its border should participate, and then let local community leaders designate which households would be in what groups. Therefore many of the PES group contracts went primarily to those households that had previously participated in other forest planting and protection programs with local authorities dating back to the early 1990s. Around 10-25% of people in studied villages did not join group

[17] K'Ho also known as Co Ho, is one of the 54 officially recognized ethnic groups in Vietnam. They are also related to the Cho Ro and Ma people. K'Ho are an ethnic group living in Vietnam's Central Highlands, mostly in Lam Dong province. Source: GSO, 2020.

contracts, and the most common reasons given was that the household had not been asked to participate by local authorities or by group heads (due to lack of labor or perceptions the household could not fulfil duties), or else the PES roster was already full.

Lam Dong province paid 500,000-600,000VND/ha/year (21-26 US$/ha/year) for PES funds at the time of the survey, and the average household income received in 2014 for participating in a group contract was 17,031,250 VND according to our household survey, accounting for on average around 20% of yearly household income (thus considerably higher than in the other two cases).[18] Groups usually followed a set patrolling schedule that rotated among the members, so that on any given week several (though not all) households would go to the forest to patrol. Depending on the community, the groups monitored forests on a weekly, biweekly or even monthly basis for forest fires and evidence of outsiders. Rangers working for some of the state forest owners often helped organize the patrol watches and supervised the weekly schedules for the PES groups, rather than letting them self-organize.

[18] Income figures were derived from recall on all sources of household income and expenditures in surveys, which were then averaged across the household sample, and the means reported here.

Table 14 - Comparison of the case studies

(Source: by authors)

Model and site	**PES payment rate** Per hectare and average per household/year	**Organization of collectives**	**Land tenure and type of forest**	**Legal rights**[19]	**Forest management actions/activities**	**Benefit-sharing mechanism**
Model 1: Community PES model in Kon Tum	9 – 21 US$/ha/year 70-87 US$/HH/year	Entire village (70-120 HHs)	Communal land title to natural production forests	Land tenure certificate for 20-50 years to the entire village. Only have management and protection rights Not allowed to sell, lease, but can inherit. No timber harvesting, no conversion to other purposes but sustainable NTFPs through new rules for community members. Allowed investment only allowed to plant native and/or non-timber species to enrich the quality of forests.	Weekly or montly patrols by forest protection team Devise new communal rules on duties and benefit sharing	Professionalized forest protection team with monthly salary Remaining revenue is divided equally among village HH members Potential for future carbon sales on voluntary or compliance market. Expanded collective benefits through a community micro-finance fund.
Model 2: Group forest PES model in Thua Thien Hue	17 US$/ha/year 78-87 US$/HH/year	Group of HHs (10-15 HHs)	Group land title to natural production forests	Land use certificate for 20-50 years to each specific group of households. Other rights and requirements are similar as in Kon Tum case	No specific forest patrol plan, depends on groups No communal rule is set up, only consensus among small groups.	Group received PES money through group leaders; divided equally among members in groups Potential for future medicinal plants and rattan plantation in group forests.

[19] Synthesized from To & Tran, 2014 and fieldnotes 2013, 2019.

						Additional collective benefits via community microfinance fund.
Model 3: Contracts and Forest Patrolling in Lam Dong	21-26 US$/ha/year ~ 750 US$/HH/year	Groups of HHs (8-12 HHs)	No land tenure, patrolling contracts only to natural special-use and protection forests	Generally, one-year renewable contracts Depending case-by-case, forest development on allocated land with communities is allowed (e.g. allowances for restoration or replanting) No use rights to forests rather than NTFPs and dry firewood.	Weekly or monthly patrols of assigned forest area, checks by state forest owner Formal rules and regulations specified in contracts from state forest owners	Group received one lump sum; divided equally among members by group head No additional collective benefits

4.2.6.2 Local perceptions of costs and benefits from participation in collective PES

Across the three case studies, there were varying perceptions of the benefits of participation. In Lam Dong (model 3), 72% of households surveyed said their main priority for participating was to receive household payments, with only 2% interested in community benefits, such as "access to land rights" or "to improve community social relations", as there were no options for community benefits within PES contracts, with the only collective component being group patrols. In the other two projects, there was higher awareness of and interest in community benefits. The message of "protect forest for selling carbon" in Kon Tum had raised hopes of gaining more benefits, and to achieve that goal, villagers agreed that commonly-held forests could be protected by the entire village for the collective good. Many households, especially those lacking land, were willing to shift livelihoods to remittances, and away from swidden agriculture, to ensure compliance with forest protection rules, particularly in anticipation of higher future carbon payouts (cf. Nguyen, 2014: McElwee et al., 2017). The active participation and equal distribution of PES revenues along with other support, such as community land titles, professionalization of protection teams, and the community micro finance fund continued to strengthen that belief: one village leader noted "*although the current payment is not high, it is said that the project will support us to get carbon credits next year, the income will increase*. *So, we still try to protect the forests*" [interview, 2020].

In models 1 and 2, where households did not receive large individual payments from PES, innovative approaches to pool some PES funds had allowed them to enjoy some collective benefits, like group and community loan funds. Further, access rights to NTFPs were an important benefit across model 1 and 2 (in model 3, PES payments were considered higher than NTFP benefits and so NTFP use was very low), and the ability to enrich community forests with additional economic plantings (e.g., rattan in model 2) further raised the prospect of improved benefits in the future. Recently, with the support of a number of NGO projects and local forest rangers, PES groups in model 2 have also worked together to build appropriate forest patrol routes and detailed plans, helping to reduce staffing, take advantage of teamwork, and reduce risks during forest patrol activities.

Yet while two of the three different collective PES models have provided both individual and some community benefits, at the same time, there remained pressures to convert forests for cash crops (in model 1 and 3) and commercial acacia plantations (in model 2) for even higher financial gain. In the sites with low household PES payments, recipients considered it too low to cover their opportunity costs. For example, in model 1 in Kon Tum, the difficulties of making a living under

the strict rules had affected poor and landless households, whose main income sources were restricted, and according to our survey, the first years of the project saw declines in local livelihoods as PES payments were not enough to compensate for rising opportunity costs. In model 2, many households perceived little direct benefit from protection of the forest; as one community leader said, "*This forest is very poor. If we convert these poor forests into acacia plantation, we can earn 40-50 million VND/ha/3 years, much higher than 400,000 VND/ha/year of PES...*" [interview, 2019]. Each person only earned between 100,000 - 150,000 VND per day (5-6 US$/day) through patrolling, half of what they can earn for wage labor in other activities. Thus, the payment is considered not worth the effort; "*the payment is too low while patrol activity is dangerous if you meet illegal loggers"* said one village head [Interview, 2019].

These pressures were compounded by low conditionality across the models. While in all three cases regular patrols were supposed to take place to identify violations of forest protection rules, these took place at variable intervals, and sometimes violations were only discovered long after the fact with no clear perpetrator (e.g., in cases of illegal logging or encroachment). Across all models, there were few provisions to make payments truly conditional upon conservation performance or outcomes. In model 3, the local state forest owners that contract out protection to households will conduct regular checks of forests, with possible non-renewal of contracts if large violations were found, while in the other two models there was little direct oversight. In the case of Kon Tum (model 1) and Thua Thien Hue (model 2), villagers needed to make sure that their allocated areas do not decrease in overall forest cover so they will receive the full payment. If forest loss occurs, they will only be deducted the corresponding PES amount for the lost forest area, without any other legal responsibilities (e.g., loss of tenure certificates). Maintaining the quality of forests (in the case of forest degradation) was generally not considered or monitored across all three models.

4.2.6.3 Institutional setting and inclusion/exclusion in collective PES models

In the three cases, the institutional setting of collective PES models varied. In model 3, group patrols reduced individual workloads, and because patrolling was either specified in the third-party contracts or organized by the State Forest owners in conjunction with their own professional ranger services, there was little need for the groups to come up with their own rules or enforcement. In model 1, many years of outside project support had finally gotten the villages to work together to protect the community forests to which they had obtained title, but this required significant outside NGOs and donors help. In model 2, where groups were self-organized by neighbors and kin, there was a lack of rules, norms, and sanctions to force members to comply or

change their behavior, and no common set of rules among PES groups had developed organically and thus needed to be supported by recent NGO involvement to build group plans.

In addition, collective PES has also led to collective conflicts in some cases. In model 2, the establishment of 22 forest PES groups inadvertently revived the concept of clans and families' rights, which previously had eroded, leading to new boundaries and exclusionary rules by the groups over areas previously believed to be common. This had led to some being unable to participate in the groups: "*I also want to join in the group. But they said they are allocated a small area. It is not enough to share if there are too many members*", said one non-PES household. Households in model 3 that were not part of patrol groups complained as well that they were not selected because they did not have a history of participating in previous forest management projects, and blamed village leaders and state forest owners for favoritism.

These challenges have led to concerns about the collective models' effectiveness among both officials and participants. We did not independently assess how forest quality outcomes had changed under PES, but there were concerns about continuing forest degradation when there were conflicts, misunderstandings, or negative perceptions. As villagers in model 2 explained, the local "land hunger" to access new farmland for commercial acacia plantation had made it increasingly difficult to get consensus among the group members and between the groups: "*they [another group] protect their group forests but encroached into our forests*" said one group member. Further, those not included in the groups who were excluded from PES participation felt resentment, with one stating that "we are complying, but they do not. Then they have land, we are landless". As a result, provincial officials complained that the lack of rule enforcement among villagers had led to continuing illegal encroachment and "*the worst PES implementation area in our province*" [interview, 2019]. While some similar conflicts with those who were excluded from protection contacts in model 3 were reported, state owners also reported that PES had offered opportunities to meet with villagers more regularly (such as when contracts were signed); officials at Bi Duop National Park reported that there had been far fewer cases of illegal logging and arson after PES implementation, which they attributed to 'better feelings' between the two sides, aided by the considerably larger PES payments there.

4.2.7 Discussion: PES and collective action outcomes

In this section, we look across the three PES models for lessons learned about different collective action approaches and discuss the factors that influenced successes on the ground and note where lessons learned might apply to other contexts outside of Vietnam.

4.2.7.1 Collective and individual benefits

Each of the case studies shows variation in how households, groups and communities received financial benefits, which depended on local geography and forest resources, type of project, resource use practices, and organization of the communities. In all three cases, *collective patrolling* enabled villagers to work together in forest protection over larger areas, thus reducing the overall cost of monitoring. This is particularly relevant given concerns about opportunity costs; if households were expected to do all the monitoring, rather than groups which shared the duties and were able to reduce the amount of labor needed by any one household at a time, PES projects would likely be seen as less advantageous. The benefits of the collective mechanisms also included *smaller transaction costs* for authorities, as they only have to deal with village leaders or group heads in contracts and enforcement. The focus on collective patrolling is relatively unique globally, and is a potential lesson learnt for other countries, where a lack of monitoring of ES flows have hampered PES implementation (Fisher et al. 2010). In the Vietnam case, the communal patrolling monitored violations of contracts or signs of degradation (but not yet ES provisioning), as well as contributing to some collective sense of obligations, and was one of the more successful parts of all 3 models.

In terms of individual household versus collective benefits, there were differences between the models. In model 3, the fact that forests are extensive, not fragmented and owned by one state agency accounted in part for the larger areas to protect and thus the higher revenues. Payments were divided equally to households, and mostly perceived as paying for the labor of patrolling rather than being paid to provide ecological services. Thus, for these groups, it was important that there was a clear determination in how the labor was organized and compensated for equitably (namely, through weekly/monthly patrol schedules and enforceable legal contracts), but beyond this, there were no further collective rules nor community benefits. The findings of the other two case studies, however, point out the advantages of collective PES arrangements in terms of providing a range of both individual and group benefits. In both model 1 and 2, communities received at least a small amount of pooled PES funds which were used to pay for revolving credit funds with the potential to benefit community members beyond those directly involved in PES activities.

Yet it is often the model 3 (with no community benefits) that is used as a positive example of the success of the PES program by the government, because it pays some of the highest household financial benefits nation-wide and can claim to be in part aimed at reducing poverty (McElwee & Nguyen, 2015). However, model 3 is not one that can be replicated in many other areas (due to forest fragmentation elsewhere), nor does the model provide for long-term collective action motivation or community benefits. Rather, there is a need to acknowledge that other collective action models may make more sense elsewhere in Vietnam, and it would be particularly strategic to use PES revenue collectively for several priorities: (1) areas with poorer forests, as individual households would incur excessive time commitments to improve them (PanNature, 2019); (2) in areas with pressures for land conversion, as the model 2 showed, as collective responsibility can discourage conversion (although not always); and (3) in areas with poor outcomes from prior CFM projects, as the collective PES model can increase consensus among community members, even with low payment levels, as was the case in model 1. Such lessons apply elsewhere as well, where prior histories of common-pool resource management have clear influences on later PES outcomes (Gómez-Baggathun et al. 2013), and which could be harnessed for improved PES institution-building, particularly where privatization of ES provisioning has proved unworkable (Unnikrishnan & Nagendra 2015). At the same time, there need to be an awareness of the challenges of collective models in leading to satisfactory participation and community benefits, as we note below.

4.2.7.2 Land tenure and rule-making outcomes

Existing research usually has pointed out that transferring sufficient property rights to local users and communities is crucial for incentivizing them to manage forests sustainably (Sikor & Nguyen, 2011; Ironside, 2017). But two out of three of our case studies show that transferring collective property rights is not in and of itself a panacea for achieving collective action outcomes, and that sometimes no land tenure title but PES financing can still motivate action. For example, in model 3, even though households did not have title or tenure over lands that they receive PES payments for, they were sufficiently satisfied by the relatively large payments not to feel any need for communal title requests for these lands (also, they would have been unlikely to receive them even if they had asked).

For the two communities with communal land tenure (model 1 and 2), they have faced challenges in translating their legal rights into effective forest management responsibilities, showing that moving from secure collective tenure to collective rulemaking is not an easy path, even with the financial support of PES. In both sites, there was still confusion over the legal framework for an

entire community holding tenure rights, and questions about whether the local community was a legal property holder with rights to civil transactions as regulated in the Civil Code. This had led to challenges in model 1 in terms of seeking to safeguard the rights of the local community to sell carbon credits in the future, and what form those future contracts might need to take. Additionally, the communally titled forests in both sites were not a return to the customary laws of the past but were artificially created to satisfy the needs of PES and other projects. For example, the forests in model 1 were fragmented into 11 different pieces corresponding to the 11 current villages, while in the traditional customary system, all forests would be accessed and controlled in an integrated way. Consequently, instead of helping to clarify rights over forest and land, PES payments may add an additional layer to an already complex property system.

Globally, communal land tenure has been pointed to as having pre-existing rules of access and enforcement that then might be successfully 'transferred' to the PES activities (Hayes et al., 2019). However, lessons from Vietnam, particularly the case study in TTH (model 2), reveals that this is very challenging where interruptions in tenure or shifts in settlements have occurred. Even though the groups had full land-tenure titles, these rights were conferred to forests with which communities had a limited history (since they were resettled in the 1990s), the forests were generally of poor quality, and pressures from commercial acacia plantations had led to questions about the point of forest protection and dissatisfaction with smaller payment sizes. Furthermore, issuing land title to groups can facilitate processes of accumulation and dispossession among kin, family members, and neighbors who share common histories and social interactions (cf. Hall et al., 2011). For example, in some groups, individual households had invested in planting rattan in the group's common forests and perceived these as their 'private' property. Thus, competition for land use within groups, among the groups, and between participants and non-participants has the potential to produce new tension and conflicts, which land titles may exacerbate, rather than relieve. The fact that both model 1 and 2 had required additional support from NGOs to devise rules and benefit-sharing plans on top of the formal tenure rights indicates that intermediary organizations are likely to be important to overcome these challenges, a finding that mirrors work both in Vietnam and globally showing how important intermediaries are in improving PES outcomes in general (Pham et al. 2010; Schröter et al. 2018).

4.2.7.3 Collective action outcomes

Social interactions are critical within collective processes, given that "social norms of reciprocity, trust and enforcement in mobilizing collective work" (Sturtevant, 2006) are needed. In this, pre-existing social capital could help improve PES outcomes. Further, collective consensus and commitment within PES design have the potential to increase social capital outcomes by creating a legitimate structure for stakeholders to coordinate with one another and with authorities with the goal of creating equity and equality. However, as many have pointed out, a community is not a homogeneous unit, and members of communities have differences in wealth, endowments, economic interests in types of use of resources or providing ecosystem services, and social-cultural backgrounds (Agrawal & Gibson, 1999). These differences can shape trust, social capital and perception of the costs and benefits, which will also influence the degree to which communities and individuals choose to participate in PES. Active participation in decision-making and compliance with PES regulations in our cases largely depended on a household's socio-political position within the community, community size, the experience of the community in previous forest protection programs, the degree to which the community's livelihood depended on forests, their ability to self-organization or benefit from the legacies of traditional customary systems, and support from state or intermediary NGO agents. Such findings mirror the complexity of other collective PES programs and common-pool resource management elsewhere, where easily-replicable or one-size-fits-all 'models' are hard to find (Fisher et al. 2010; Kolinjivadi et al. 2019).

Our collective PES case studies struggled to get full inclusion and commitment among communities when not everyone directly benefited, as well as difficulties in reaching consensus on carrying out collective forest protection activities and benefit distribution. Overall, despite new funds, communities struggled to set up common institutional arrangements and procedures for operational rules, whether due to restrictions on rights (as in model 3), lack of community agreements (model 2), or the costs incurred in giving up short-term household practices for longer-term collective benefits (model 1). In model 3, some households not included in the patrol groups were not financially benefitting, primarily due to authorities picking households that had participated in past projects, and there was no sense of collective benefits from PES. In model 1, while the new PES approach did not match traditional forest management practices, nonetheless it helped create cohesion and consensus among community members in participating and complying with regulations; even though the payment level was not very high, the desire for Red Books and forest carbon revenue in the future played a motivating role. In model 2, individual members of groups could get benefits, but distribution was not based on their real contribution to

forest patrols or resource use behavior changes, and free-riding appeared common, even in small groups, indicating how difficult it is to achieve harmony in collective PES when payments are low, individuals have a desire to increase their access to land, and social cohesion is diminished (as had happened after resettlement).

All three models had trouble establishing effective agreements and legitimization of rules in use or drawing on other cultural/spiritual benefits such as social cohesion and solidarity, despite PES funding, and in some areas like model 2, potentially because of it (due to disagreements about benefit-sharing or exclusion from resource rights). Increased forest protection required for participation in PES imposes a management responsibility upon local people, many of whom may be primarily interested in enhancing their individual household livelihoods. In these cases, households likely need more collective social benefits to outweigh the relatively modest household benefits from PES, or in the case (like model 3) where household benefits were large, increasing community benefits would have increased social capital connections and likely contributed to more cohesion across contracted protection groups (who currently work independently). Thus ideally, there would be a combination of collective and individual benefits together in collective PES schemes (see Figure 14). Yet the majority (more than 90%) of all PES contracts in Vietnam remain signed by individuals who receive fairly low payments, with little collective benefit received, outside of improvements in environmental services provisioning (Pham et al., 2013).

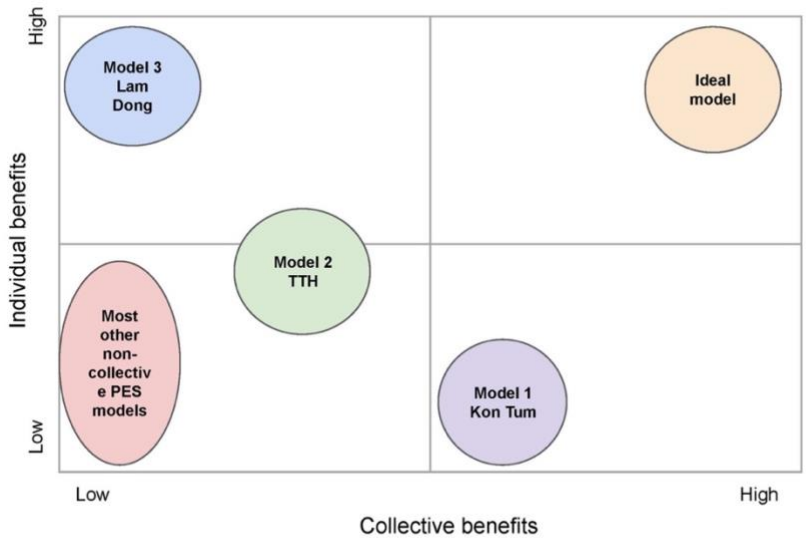

Figure 14 - Potential interaction of individual and collective benefits in PES models in Vietnam

(Source: by authors)

4.2.8 Conclusion: Improving collective PES models in Vietnam and globally

Despite a national law and uniform payment rates across the whole country, flexibility around organization of service 'sellers' and beneficiary payments have led to a patchwork of models to use PES funding for CFM in Vietnam. The three case studies we examined varied in terms of how much collective action was involved, with PES financing fostering willingness and ability to work collectively and strengthened resource conservation among some, but not all, members. None of Vietnam's collective PES models have achieved unqualified success in generating positive collective action, and each has challenges that have undermined group efforts, exacerbated underlying problems, or even created new conflicts. For example, people undertook some collective PES work but were not always driven by voluntary pursuit of shared interests, primarily because not everyone saw the value of forest protection or benefits from conservation, making truly collective action challenging. Despite increased legal rights for forests in 2 out of 3 cases, and despite increased funding and benefits for many (if not all) households in all 3 case study areas, there remain challenges in fitting collective PES to the prevailing economic and livelihood aspirations of the majority of individuals.

Based on the above findings, we argue that in order to achieve stronger collective action outcomes for PES in Vietnam, there is a need to achieve acceptable financial benefits for the large number of people working together, while on the other hand, there needs to be sensitivity to variation within collective arrangements and benefits, recognizing the variety of interests that members may have. Each of our cases demonstrated the need for flexible governance arrangement beyond 'top down' and 'one size fits all' so that collective PES enables the emergence of institutions capable of overcoming the many constraints faced in Vietnam, from histories of dispossession, poor outcomes from previous community forest models, and competition for land.

Despite enthusiasm for linking ES provisioning, PES models, and common property and collective action in theory (Swallow & Meinzen-Dick 2009; Rodela et al. 2019), our research confirms that such linkages can be extremely challenging to implement. Each of the three models had some positive elements, while others were insufficient, indicating that overcoming collective action dilemmas, even with PES money, remains a challenge, and there remains much work to do on this in Vietnam. Further, our evidence questions the idea that PES can easily 'piggyback' on existing CFM or other community-based models, or that the additional PES financing alone can help create appropriate rules to ensure optimum resource use, beneficial collective action, or build social capital. We argue here that 'institutional crafting' in collective PES is like that of CFM in general – it should reflect the complexity, diversity and ad-hoc nature of institutional formation

in practice (cf. Cleaver, 2002). Design, implementation, monitoring and evaluation processes will likely require consistent revisiting to leverage the effectiveness of collective PES models.

Collective action needs to match people' aspirations and the effort they are willing to put into the management of common forests, otherwise, new conflicts among members may arise, driven by varying perceptions on participation, motivation, and compliance among and within groups. Thus, our key findings are that collective forest management under PES does not need to follow a fixed shape—as we noted with a variety of land tenure, benefit sharing systems, and payment rates in our case studies—but it does need to be a result of process considered locally legitimate and will likely need institutional support (such as through intermediaries) beyond PES payments alone. The considerable variation across the sites in terms of communities' ability to successfully organize and formalize collective action activities, particularly where there was strong pressure for privatization of resources and influence of market forces, calls for flexibility and adaptive mechanisms, supported by NGOs or other actors. Additional efforts to improve existing local institutions' capacities and reinforce group cohesion to achieve collective action success are needed, but the existing PES system has not yet been able to support these efforts systematically, which will remain a challenge going forward unless formally addressed in policy and practice.

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CHAPTER 5

The smallholder tree plantation territory: A new frontier of land access and control

5.1 Preface

Over the last three decades, Vietnam has increased national forest cover through large-scale tree plantation efforts. Millions of hectares of bare land and natural shrublands, especially in the Vietnamese Upland regions, have been replaced with monoculture fast-growing tree plantations, such as acacia. Much of this work is being carried out by individual households, who now control 70% of the country's forest plantations. The engagement of local villagers in tree plantations has significantly improved household livelihoods, rural development, as well as national income through the timber-related industry sector. In short, the development of the smallholder forest plantation over the last three decades has led to major transformations of not only forest landscapes but also rural agrarian economies across the Vietnamese Uplands.

The next chapter looks into this new significant form of land use. In it, I ask important questions on land access and control that have accompanied the rise of commercial smallholder acacia tree plantations in Upland Central Vietnam. In doing so, it addresses my second research (RO2) sub-question *How and why do the successive policies and interventions along the FT making process affect local structural and institutional access and control over land*?

The chapter starts by viewing the expansion of smallholder acacia plantations through the lens of land grabs/acquisitions in commodity non-food plantation boom. I then build an analytical framework that examines a hitherto poorly explored dimension in the land grabs/acquisitions literature: local smallholders and their agency. The main theoretical foundation for my analysis is the theory of access as developed by Ribot and Peluso (2003, 2020). I investigate the range of powers – embodied in and exercised through various mechanisms, processes, and social relations – that affect local people's ability to grab land for expanding tree plantation farms. I argue that far from being the stereotypical victims or resisters in a land grab situation, villagers are proactively and creatively navigating between customary institutions and state forestry and development policies in order to acquire land. I document various mechanisms to claim land, to consolidate forms of access, or to exclude others, all for expanding acacia by smallholders. I label these mechanisms as '*land acquisitions through bricolage'*, in that villagers have taken advantage of the points of convergence between the state and the local tenure institutions to produce their own new access opportunities and new mechanisms to secure land for acacia.

Furthermore, I contextualized the local findings into the broader process of Vietnam's forest transition and in the broader context of post-Doi Moi reforms and further rapid forest governance change and commercialization across Upland in the Global South. The findings thus are not just a case study but can also be replicated elsewhere and contribute to broader debates, not only on

dynamics of social power relations around land and production processes in analyses of land acquisitions as mentioned above but also on the political economy of forest commercial tree plantations and its long-term environmental and social implications.

The rise of smallholder tree plantations, as I examined in the chapter, is a 'gateway' to open a new frontier of land control by local smallholders – where new power, new enclosures, property regimes, and territorialization to produce new 'forests' (also see in Chapter #3). It also creates new labor and production process, new actors, subjects, and network connections, new legal and violent means, new livelihood patter, and then new local identities. All also have implications and are connected to broader transformation across Upland regions.

This chapter's identification of dynamic smallholder land acquisition processes also contributes to broader discussions about the 'sustainability' of forest transitions, not only from the ecological aspects but also from the political and social aspects. It allows us to revisit the role of smallholders, and reflect on securing social safeguards for them, such as land tenure and livelihoods, in a context of social, ecological, political and cultural transformation. The findings of my research even become more crucial in the context of expanding forest canopy that we're seeing across the globe. The take-home message for on-going restoration and reforestation campaigns, such as Bonn Challenges, 10 billion trees or forest-related climate change mitigation initiatives, such as zero-deforestation or Reducing Emissions from Deforestation and Forest Degradation plus conservation, the sustainable management of forests and enhancement of forest carbon stocks (REDD+) is that they need to seriously consider the mechanisms and land dynamics underlying how their restoration and reforestation interventions will occur in a diversity of local contexts.

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5.2 Paper

Title: **Land Acquisition through Bricolage? Politics of Smallholder Acacia Plantation Expansion in Upland Central, Vietnam**

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5.2.1 Abstract

Commodity booms can lead to intense pressure to access land resources. We investigate a case in which villagers, far from being passive victims of land grabs, acquire land themselves by navigating between customary institutions and state policies seeking to foster a forest transition and rural development. Based on fieldwork in an upland forest-rich commune in Central Vietnam, we describe specific mechanisms of enclosure, encroachment, theft, and re-claiming by which villagers re-territorialize forest spaces to their advantage. These mechanisms change and adapt over time, notably in response to a closing of the forest frontier, illustrating the challenges facing locals seeking livelihoods and state officials managing forests. The paper challenges dominant assumptions about local villagers' positionality in the global land rush and calls for rethinking the nature of contemporary peasant politics worldwide.

Keywords: Land grabbing, enclosure, encroachment, forest transition, agrarian transformation, smallholder plantations, acacia, land access and control, Vietnam.

5.2.2 Introduction

Land acquisitions are often pushed by demand for commodities. Research on the recent wave of such 'land grabs' have typically focused on in the agricultural, biofuel and mining sectors (Heinimann and Messerli 2013; Kröger 2014). Attention is most focused on large-scale[20] and long term[21] land deals (Friis and Nielsen 2016). They emphasize land acquisitions driven by large-scale, non-local actors, such as foreign and domestic state entities or private sector groups (Hall 2011). Research demonstrates that the resultant changes in land control and land-use have strongly affected villagers' livelihoods and in many cases, alienated them from the land they previously used or potentially could use, leading to resistance (Hall 2011; Hall, et al. 2011; Li 2014; Borras and Franco 2013; Mamonova 2015; McKay and Colque 2016).

The dramatic growth of acacia plantations in Vietnam in the past twenty-five years (Cochard et al. 2020) suggests a different set of patterns in a case of commodity-boom land acquisitions. It embraces several anomalies (cf. Sikor 2012). First, the acacia boom is strongly characterized by small-scale land acquisitions by a broad swath of rural households, on land previously state-controlled or formally unclaimed. Second, rural households are active and willing participants, rather than resisting these far-reaching transformations. Third, the phenomenon involves the forestry sector, which has not typically involved smallholders but instead state forest bureaucracies and private companies. Fourth, the role of the state as a strong initial instigator, and

[20] By large scale researchers typically look at land areas over 200-1000 ha
[21] Long term: over 30-50 years, even 99 years (Antonelli et al. 2015)

constant yet evolving institutional presence and partner, complicates the analysis of actors and institutions shaping the process.

This paper seeks to learn from these anomalies by documenting the dynamics of small-scale land acquisition in a case of rapid smallholder forestry expansion in Vietnam. Specially, we analyze the *mechanisms* by which rural households have been able to access land resources to grow acacia. We show how those mechanisms evolve over time – in a context of changing state policies, developing market demand, increasing local experience and interest – and how they draw from institutional registers rooted in ethnic traditions as well as state policy. We describe this as a process of *bricolage*, whereby local farmers opportunistically adapt local customs and state rules to access land.

In doing this, we contribute to investigations of land dynamics under commodity booms. Instead of providing a facile 'reversing' of the narrative of 'from above' land grabbers and local victims, we deepen recent more nuanced investigations into agency 'from below', by local villagers (Borras and Franco 2013; Hall 2011; Hall et al. 2015; Peluso and Lund 2011). We also contribute to documenting the processes underlying a 'forest transition', or a turn-around in forest cover, from deforestation to reforestation, linked to social, economic, and political change (Kull 2017; Mather 1992). While researchers have proposed several different constellations of driving forces and actors behind forest transitions – such as a state forestry policy pathway driven by perceived scarcity or crisis, or a smallholder tree-based land use intensification pathway driven by livelihoods (de Jong et al. 2017; Lambin and Meyfroidt 2010) – less attention has been paid to the types of detailed, fine-grained processes of land access underlying these pathways. A forest transition, whether considered as a description of past and ongoing dynamics, or as a normative prescription for a possibly sustainable future, requires attention to how it unfolds on the ground.

This paper begins by reviewing the conceptual bases for our investigation of land control politics in the case of a forest transition and commodity boom. We then outline our fieldwork methodology and introduce the case of Vietnam's acacia boom and its broader contextual background. We then move to a detailed case study in mountainous Huong Nguyen commune (Thua Thien Hue province, central Vietnam), starting with the history of ethnic minority settlement and continuing up to today's dynamics of commercial acacia plantations. This is followed by our presentation and analysis of the different mechanisms and tools by which villagers gain access to and control land for acacia production. The final section discusses the findings in the context of broader processes of agrarian transformation and forest transition in contemporary Vietnam.

5.2.3 Land access dynamics in smallholder forestry frontiers

Our focus is on the institutional mechanisms, power dynamics, and historical unfolding of land access dynamics in a particular set of circumstances: a tree-based commodity boom shaped as much by state forestry policy as market demand. This can be seen as a case of frontier dynamics that reconfigure existing social and institutional orders (Rasmussen and Lund 2018).

Land acquisitions gained attention after the wave of large-scale 'land grabs' incited by the 2007 global food price crisis. Research on commodity booms more generally have documented that they are typically accompanied by consequential dynamics in who controls and accesses land to grow the commodity in question, including various forms of accumulation or dispossession (Mintz 1986; Nevins and Peluso 2008; Peluso and Lund 2011). Most research on land deals focus on food production. However, booms in tree cultivation, whether for timber, pulp, or other economic products, also merit scrutiny for their impacts on land access dynamics. All the more so given enormous current interest in climate mitigation and other ecological services through tree planting (Holl and Brancalion,2020; McElwee and Tran 2021) in an emerging 'bio' or 'green economy' (Kröger 2014; Peluso and Vandergeest 2020).

Whether involving agriculture or forestry, commodity booms often lead to new forms of land control, new actors and new mechanisms to acquire land. In many cases researchers have documented enclosure and/or accumulation of land by certain groups of actors, and in consequence the alienation or dispossessions of others (Borras et al. 2012; Borras and Franco 2012; Hall 2011; Mintz 1986; Nevins and Peluso 2008; Peluso and Lund 2011; White et al. 2012). What is unusual in the case of Vietnam is that the acacia boom appears to have empowered rural smallholder households, a category of actors usually considered as victims in cases of land acquisition. This suggests that too much focus on 'outside grabbers' and a romanticization of resistance by local people can obscure more complex and broader ranges of land acquisition processes in practice, and that local smallholders are frequently overlooked as key actors in land acquisitions in crop boom (Bersaglio and Cleaver 2018; Hall, et al., 2011). In practice, as local actors negotiate and capture aspects of interventions from above, they insert their own motives and desires in order to influence the extent to which external actors are able to 'prescribe activities within spatial boundaries' (Vandergeest and Peluso 1995: 388).

While forestry has typically involved state agencies or private companies, in recent decades, smallholders have increasingly come to play a role in forest restoration and forest plantation efforts worldwide (Chazdon et al. 2017; Nawir et al. 2007). A pattern of smallholder forest expansion has occurred in settings where smallholders found sufficient value in forest products to

invest the labor to plant trees. Such trends have been documented in parts of Africa, Latin America and Southeast Asia for at least three decades, sometimes facilitated by ambitious policies for forest landscape restoration involving smallholders (Holmgren, et al. 1994; Kull 1998; McElwee and Tran 2021). According to Del Lungo et al. (2006: 24), a third of global productive planted forests were owned by smallholders in the early 2000s, compared to less than 10% in 1990. This trend has continued recently with the convergence of environmentally-motivated tree plantation programs and high market demand due to the emergence of a forestry sector in Southeast Asia (Overbeek et al., 2012; Kröger 2014).

The increased participation of smallholders-in forest commodity plantation booms leads to new land dynamics. Based on work with other types of commodity crops in Southeast Asia, Hall et al. (2011) show how villagers have actively sought means to assert new forms of land control, acquiring land from village commons or another actors' land, or even 'intimately' among neighbors and kin. These are 'from below' land grabs (Borras and Franco 2013; Hall 2011): new ways in which processes of land accumulation work at a local scale. Such acts may cover small plots individually, taking place day-by-day in piecemeal ways, but their cumulative impact may come to thousands of hectares and be equivalent to the scale of large land acquisitions (Friis and Nielsen 2016; Xu 2018). Our study shows that these dynamics also take place in forestry booms.

In order to unpack these local land access dynamics, we rely on the the theory of 'access' developed by Ribot and Peluso (2003). Their framework allows us to examine how villagers' ability to benefit from resources is not only based in formal rights (property and tenure claims) but also in a larger array of institutions and political-social-economic relations. In addition, their framework allows us to identify and describe specific types of strategies, mechanisms and relations of access among those who control and those who seek to gain or maintain access – through co-operation, competition, conflict, and negotiation (Peluso and Ribot 2020).

In addition, the concept of 'bricolage' (Cleaver 2000; cf. Dressler et al. 2012) allows us to make sense of the way in which access rights are negotiated opportunistically at the intersection of state programs and policies with local norms and traditions. As regulatory, political, and socio-economic conditions evolve, the villagers stay acutely aware of the nuances of their access rights and what powers, discourses, technology, and capital they could mobilize to produce new access opportunities (cf. Sikor and Lund 2009; Ribot and Peluso 2003; Peluso and Ribot 2020). The strategies and mechanisms we describe can be labeled as *land acquisition through bricolage*, in that the ways in which villagers get access to land for growing acacias are "borrowed or constructed from existing institutions, styles of thinking and sanctioned relationships" (Cleaver 2002: 16). Through a process of tenurial bricolage, villagers have taken advantage of the points

of convergence between the state and the local tenure institutions to produce their own new access opportunities and new mechanisms to secure land for acacia.

5.2.4 Methods

This research builds on a case study of Huong Nguyen commune, which is found within A Luoi district, a mountainous area of Thua Thien Hue province, Central Vietnam. Based on available government forestry and socio-economic data and preliminary fieldwork in the summer of 2017, we determined that this case is a particularly dynamic example of the acacia frontier. The lead author lived for a total of three months in the site between August 2018 and June 2019. Specific methods included observations, interviews, focus groups, a survey, and collection of documents, reports, and government statistics.

Eight focus group discussions facilitated the exchange of ideas and encouraged interaction among the participants to understand historical contexts and map out dynamics of forest and land-use changes at the local level. Formal and informal interviews were conducted with key informants, including 4 local communal authorities, 2 local forest rangers, 11 leaders of community forest protection teams, 3 representatives of nearby state forest owners, 4 village headmen, 4 village elders, and 20 male and female villagers.

We conducted surveys with 91 households in all four villages of the commune covering both quantitative livelihood data and open questions on land access. Participating households were purposively selected through a stratified sampling approach to reflect the range of socio-economic levels (see Table 15); including 21 female-headed households (equivalent to 23% of the household surveyed). The survey helped generate quantitative data to describe the differences in material conditions and benefits those different villagers derived from access and control over land for their livelihoods.

Interviews, surveys, discussions and observations were held in various settings, including in fields, forest, and offices, but most commonly in the community meeting hall, or in villagers' houses during lunchtime or the evening when people finish their working day. All interviews, survey and discussion were conducted face-to-face by the researchers in the Vietnamese language (this was not a barrier as most of the respondents – of the Katu ethnic minority – were fluent in Vietnamese). Informed consent was generally sought orally, as written consent from villagers was either impractical due to poor levels of literacy or considered too invasive inherent from data sources, investigators, and methods to depict the complexity of this situation.

Table 15 - Characteristics of households (HH) surveyed in Huong Nguyen commune

(Source: Huong Nguyen CPC and household survey, 2019)

Village	No. of HHs	No. of people	% Ethnic minority people (mostly Katuic)	No. HH surveyed	Classification of a multidimensional socio-economic status[22] for HHs in Huong Nguyen Commune					
					Poor HH	Poor HH surveyed	Near-poor HHs	Near-poor HHs surveyed	Medium HHs	Medium HHs surveyed
Mu Nu – Ta Ra	108	416	100%	23	38	n = 10	18	3	56	10
Chi Du – Nghia	72	281	98.6%	24	19	n = 10	7	2	46	12
Giong	84	344	97.6%	21	16	n = 6	4	2	64	13
A Ry	84	321	76.1%	23	15	n = 7	3	2	66	14
Total	348	1362	93.39%		88	N = 33, 26.07 % of total poor HHs	32	N = 9, 28.12 % of total near poor HHs	232	N = 49, 21.12 % of total medium and rich HHs

5.2.5 Background: the rise of smallholder tree plantations in Vietnam

Over the past twenty-five years, plantations of fast-growing trees have swept across Vietnam (Cochard et al. 2020). According to the latest official data, fully 13% of Vietnam's territory is under tree plantations, of which 65-85% is acacia (MARD, 2020). Acacia, locally known as *keo*, is native to Australia, and represented mainly by two varieties: *Acacia mangium* and a locally bred hybrid of this species with *A. auriculiformis.* Millions hectares of bare land and shrublands that local communities lived off have been replaced with monoculture plantations (Sikor 2012; McElwee 2016). Smallholders[23] account for 52-64% (Sikor and Baggio 2014) or nearly 70% (MARD, 2020) of the total tree plantation area. According to Midgley, et al. (2017), smallholder planting areas may be even larger than captured in government data. They identify at least 600,000 ha of unaccounted acacia smallholdings and informal plantings in areas not designated as forestlands, such as gardens, agricultural land, roadsides, or illegal encroachments in natural forests.

Household tree plantations have become a significant contemporary land-use across rural and upland regions in Vietnam (Do and Mulia 2018, Nambiar et al., 2015, Ohlsson et al. 2005; Sandewall et al. 2010) and form the backbone of the wood supply economy (La et al., 2020). The

[22] According to Decision No.59/2015/QD-TTg dated November 19, 2015 promulgating multidimensional poverty levels applicable during 2016-2020, socio-economic status of households can be divided into 3 levels: poor, near-poor and medium based on the month per capita income and access to 5 social services (health, education, housing, clean water and sanitation, and information). Source: https://bit.ly/3gK4xVP

[23] By smallholders, in the case of tree plantation participants in Vietnam we refer to rural households with plots of less than a single hectare up to 10ha.

plantations are cultivated on small plots measuring anything from less than a single hectare to a few hectares (Sikor 2012). In rural areas such as in the mountains of Thua Thien Hue province, acacia plantations are the main source of income for villagers (La et al. 2020). Vietnam now produces some 10-12 billion USD of wood products for export per year based, contributing 6-7% to the national economy (MARD, 2020).

The development of smallholder tree plantations over the last three decades in Vietnam took place in a context of major transformations to rural agrarian economies as a result of the country's post-socialist transformation (Kirkvliet and Porter 1995, Sikor et al. 2011, Tai and Sidel 2013, McElwee 2016). Rural villages increasingly benefit from better services and infrastructures, their reliance on both cash-crop and non-agricultural income has increased, and migration for studies or jobs is common, though more for better-off households (Tarp 2017). Vietnam's political and economic reforms have accelerated the shifts in upland crops, labor and land-based resources (Sikor et al. 2011). However, unlike purely market-oriented agricultural commodities like cassava (To, et al. 2016), smallholder acacia plantations also fit into broader state strategies to increase forest cover, boost timber processing industries, and create economic development opportunities for improving rural livelihoods (Sowerwine 2004; To 2007; Auer 2012).

Specific state strategies included allocating forestland to households and communities; large-scale planting programs; identifying target landscapes and suitable tree species; and finally facilitating a wood products economy. We review each in turn.

First, the government led land tenure reforms that transferred agricultural and forest land to non-state actors and private hands, including households (Clement & Amezaga, 2008; McElwee, 2009; McElwee, 2016; To, 2008; To et al., 2019; To & Tran, 2014). Around 7 million ha of forestland – most of it barren and in need of reforestation – were allocated to non-state units, mainly local households. This tenure reform was made possible by the 1988 and 1993 Land Laws, the 1991 Forest Protection and Development Law (FPDL), and various supplemental decrees. Land recipients were granted rights to exchange, transfer, lease, inherit, and mortgage the land for 50 years, with land-use certificates (LUCs) issued by the local government. The government expected that by giving local people more access to land, with clear tenure rights, they would be motivated to invest in the land, benefitting them, the country's forest cover, and the economy (To 2008).

Second, at the same time, the Vietnamese forestry sector underwent a crisis. Forest cover had dramatically declined from perhaps 43% of national territory in 1943 to 16-27% in 1993 (estimates vary: Cochard et al. 2020). This crisis spurred profound changes in the Vietnamese

forestry sector, shifting its emphasis from timber extraction into forest production and protection (McElwee 2004, 2016; Nguyen 2009), through implementing several ambitious nationwide policies and programs for forest protection, restoration and tree plantations (Bartlett et al. 2017). In particular, with the support of international donors, the country embarked on successive large-scale environmental restoration plans to reforest much of the uplands with small-scale tree plantations by villagers. These included subsidies and concessionary loan schemes to get smallholders involved in tree plantations. The first major program, named 'PAM' in the late 1970s, invested in planting nearly 450,000 ha of forest (Ministry of Forestry 1991). Smallholders, mainly in the North and Central Coastal Region, were provided with food or cash and tree seedlings. The next major program, the 327 Program, ran from 1992 to 1998 and created policies to bring barren land into effective use. The follow-on 661 Program, launched in 1998, aimed to create five million ha of new forest (3 million were for wood production through afforestation) in the country by 2010. Unlike the PAM and the 327 Program in which the local people were passive participants, Program 661 considered local people as the main actors in forest planting and main beneficiaries of these activities. Between 1990 and 2010, the country expanded its total tree plantations from less than 1 million ha to 3.3-3.5 million ha (MARD 2011; To and Tran 2014).

Third, as part of these programs and its general forestry planning, the government identified priority zones for tree plantation investments. These included nearly a third of land areas in rural and upland regions, mainly steep mountain slopes denuded by human activities like shifting cultivation and logging, or hilly regions with bush, scrub, or grassland vegetation (McElwee 2016, 154). The process also encompassed different strategies for replanting forests, such as surveying, boundary demarcating, mapping, land-use planning, issuing policies on land-use and land management; implementing policies on land allocation; then delineating how and by whom these activities can be carried out; as well as market, financial and technical supports to help the process take off.

Fourth, the government identified suitable tree species for planting. The dominant trees were mainly fast-growing acacias and eucalypts (Tran et al. 2020). They can be grown on rotations shorter than those employed for other species, such as pine, teak, or other native species, and are versatile in use (Nambiar, et al., 2015). In the beginning, villagers had no particular interest in acacias. They planted trees in priority areas defined by the government, largely to claim land during a brief phase when the country radically shifted from state planning to privately held land ownership (Pietrzak 2010). The short rotation times (three to six years) and lucrative market prices for acacia wood – together with its tolerance of diverse soils and its suitability for small plantations (0.1 ha and up) made it a favorite of smallholders.

Last but not least, the market has played an important role, facilitated by state encouragement of a forest processing industry. The Government's Program 147 (2007-2015) encouraged commercial forestry activities through investment in nurseries, roads, forest product processing mills, and factories. Powered by increased global demand, the wood processing and export industry has been steadily expanding, especially since the 2000s, promoting rapid growth of land devoted to plantations using fast-growing species (Tran et al. 2020).

Sparked by this raft of policies, villagers around the country quickly engaged in planting and integrating exotic trees into their land-use systems. Much commentary has focused on the financial profitability of small-scale tree plantations and on questions related to subsidies and technical supports for the expansion of the tree plantations (Pietrzak 2010; Nambiar et al., 2015; Maraseni et al. 2017; La et al., 2020). Less attention is paid to the underlying land access dynamics, and how they build on and diverge from the above-listed government initiatives. For that, we now turn to our case study.

5.2.6. Huong Nguyen case study

5.2.6.1 Settlement history and livelihoods

We now zoom in to Huong Nguyen commune, located in A Luoi district, Thua Thien Hue province. The commune spans a number of valleys in the Truong Son mountains, with the current settlement found in a hilly basin at the northern end of the communal territory. The commune stretches across 32,700 ha but is quite small in terms of population. It consists of 4 villages with 1360 people in 348 households. Villagers in Huong Nguyen mostly belong to the Katu ethnic group - traditionally a forest reliant group considered the first settlers in the Central Truong Son mountains.

Elders in Huong Nguyen recalled that their ancestral villages in a remote stretch of the Huu Trach river valley were created approximately a century ago, during the "time of the French" (*thời người Pháp)* by a few small groups migrating from Nam Dong and Quang Nam (see Figure 15). Since then, the Huong Nguyen settlements have relocated several times. At the height of the war in the late 1960s until late 1976, they moved out of the valley. Those who returned, together with some new Katu immigrants, officially established Huong Nguyen commune under the Hanoi-based government. The second move occurred in late 1996 when the A Luoi District People's Committee ordered villages to relocate close to national road QL 49 to enable easier management and facilitate other environmental and development plans, such as hydropower development and the creation of a nature reserve. The current location, called *Ta Luong,* was previously part of the adjacent Hong Ha commune, also home to Katu people. When the villagers moved in, they joined

about 12 households already present. Resettlement has interrupted villager's ties to traditional forest landscapes and practices, as elsewhere in Southeast Asia (Hall et al. 2011).

Katu institutions, social structures, religious beliefs, and livelihood strategies were traditionally strongly linked to the forest landscape in which they live (Arhem 2014). In the old Huong Nguyen village sites, people practiced a subsistence economy, primarily based on slash-and-burn rice farming and animal husbandry (mainly buffalo and cows left freely in forests). They also planted *lồ ô* bamboo along the river, collected non-timber forest products, and used timber for their houses. After the war, villagers started to use flat areas with good water access to build terraces for wet rice production. Some outsiders came to prospect for gold; local people participated in these activities along streams and tributaries. Being deep in the forest and lacking a road connection, the river was the main trade route for goods like forest products and gold.

When the villagers moved to the new Huong Nguyen, "*the landscape was completely different*", the village head revealed [Interview #87, April 2019]. The landscape at that time of the new village site, as described by elders, was mainly bare, or forestland with low-value timber trees and bushes on it; rich natural forest still existed far to the South, towards the old Huong Nguyen, but belonging to the State. The forest in the new site, particularly along the road and river corridors, was strongly damaged by bombing and chemicals during the war (Biggs 2018). Thus, with the government's support, villagers had to start building a new place. They built wet-rice paddy fields, planted *lồ ô* along the small streams, and cleared nearby forest areas to grow crops like hill-rice, cassava, and maize. Animal husbandry could not be developed due to several reasons: (i) villagers could not bring their cattle from the old villages and (ii) did not have money to buy new ones; (iii) there was no fodder as the grass cover was very flammable in the dry season and was burned by locals for cultivation or to locate war-related scrap metal to sell; and (iii) due to the cramped landscape, the cattle could damage swidden crops of other villagers and create conflicts.[24]

[24] Reasons for lack of uptake of animal husbandry were discussed in focus group discussion [FGD #1-8, 2019].

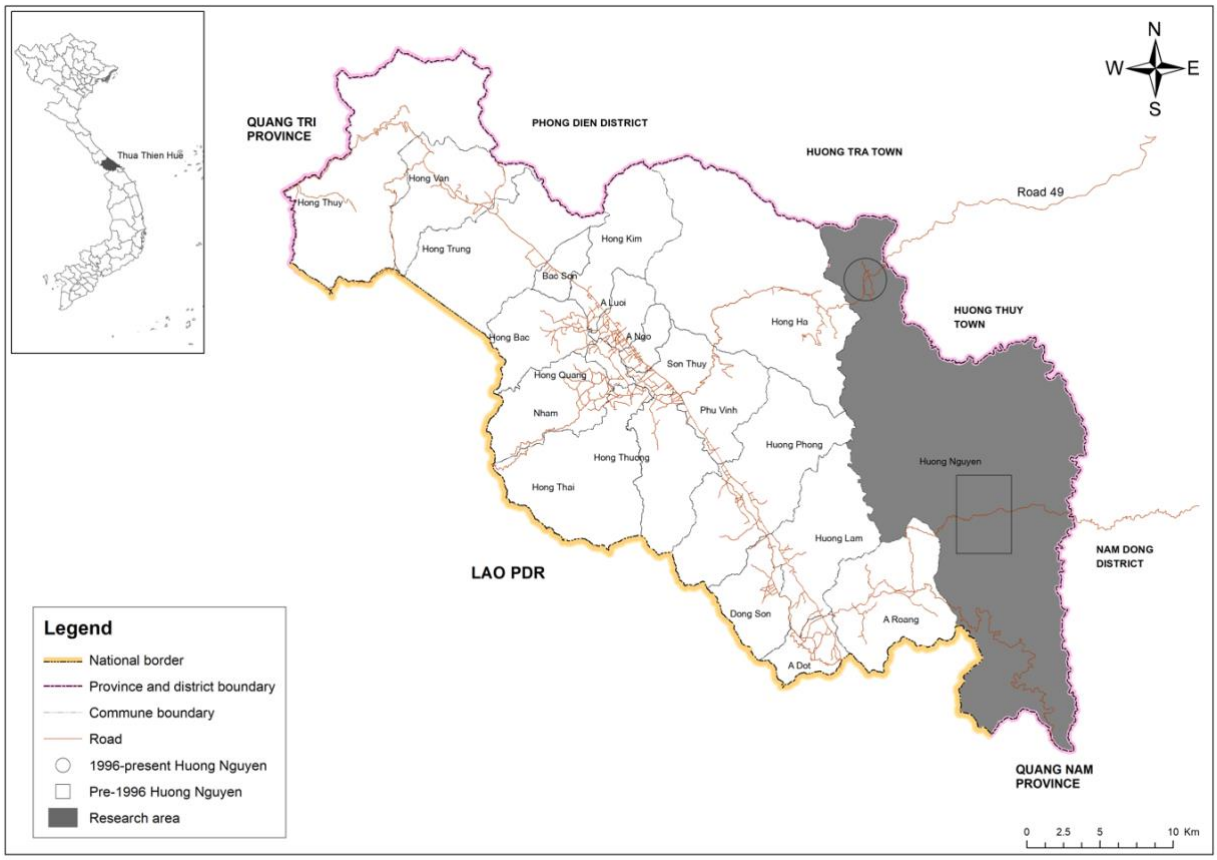

Figure 15 - Huong Nguyen commune in A Luoi district of Thua Thien Hue province
Source: by authors.

In the past, villagers had their own forest classification and access regimes. The forests were classified into three categories. *Ghost/spirit* forests, which were of spiritual importance, and *headwater forests* which protect water sources were communally protected and typically consisted of rich forests. Cutting timber in these forests was only allowed for communal purposes. Meanwhile, *forests for exploitation* – normally young and relatively poor forests - were central to livelihoods via swidden agriculture (cf. Bayrak et al., 2013). These forests were divided and allocated among different clans by the council of elders and the village patriarch. The clans, consisting of five to ten households, would distribute land among their households (ibid.). Once the land was allocated and cleared for cultivation, the household's private claim was established and maintained even when the land was left to fallow for a few years. Clans were the strongest social structures in the village, rather than the village as a whole, particularly concerning land and labor exchange [FGD #1, Jan 2019]. The above land access institutions continue to play a role in land dynamics, as we will see below.

In new Huong Nguyen, villagers recalled that the Government allocated 1 ha of residential land and 1 ha of wet-rice paddy to each household during the latest resettlement, but no swidden land.

This State land distribution was not based on household size: "*the State allocated land was not enough to cultivate food, especially for households with a large number of children"*, one elderly household shared [Interview #60, March 2019]. At this time, Huong Nguyen had 100-110 households [Interview #87, April 2019]. Households established after resettlement had to cultivate their parent's allocated land, seek suitable areas for new terraces, or open new swidden fields in the nearby forests. Such new paddy fields and swidden lands were established under traditional access and ownership regimes as described above.

Just over 34%[25] of the households are today classified as poor or near poor making the commune among the province's poorest communes (see Table 16). According to our survey, the poor and near-poor households consist mostly of newly established young couples (average age 25-30) or women-headed households with a lack of labor force. The main sources of income in Huong Nguyen come from tree plantations (rubber and acacia), forest protection subsidies, NTFP collection, and acacia-related labor wages (see Table 17). Unlike many other rural communes in Vietnam (cf. Tarp 2017; Simelto et al., 2021), off-farm work is uncommon despite some programs encourage villagers to diversify their livelihood activities. Likewise, even if some members of the younger generation seek better education in nearby cities, the percentage staying in the cities or out-migrant for work is insignificant, accounting for 5.4% of total commune's population (Huong Nguyen CPC, 2019). Most of them prefer to return to work locally, "*work in the city can get pay higher, but the cost is also expensive and unsafe. Go back home and plant acacia/rubber maybe better*" [Interview #42, March 2019].

Table 16 - Key socio-economic characteristics of Huong Nguyen commune
Source: Huong Nguyen CPC, 2019; focus groups and household survey, 2019

Total Households	348
Total population (no. of people)	1362
Household size (no. of people)	3-4
Total paddy land (ha) (for wet rice, dry rice, corn, cassava, etc.)	156.5
Paddy land per HHs	0.49
Rice per capita (kg)	299

[25] Huong Nguyen Commune People's Committee (CPC). 2019. The Annual Social-Economic Report of Huong Nguyen.

Total forest plantation area (ha)	258
Forest plantation land per HHs (average)	0.74
Total rubber plantation (ha)	428.7
Rubber plantation land per HHs	1.23
Main sources of household income	Tree plantation (acacia and rubber) – 46%, acacia-related labor wage (34.8%), state subsidies (10.4%), non-timber forest product collection (3.48%), forest protection contract (1.7%) and others (3.62%)
Total household annual income (million VND)	15

5.2.6.2 State control over forests in Huong Nguyen

The presence of state forestry was not felt in old Huong Nguyen due to its remoteness. After the war, the forest areas surrounding the (future) resettlement village sites and extending far to the south (even over the old village sites) were allocated to managed by two State Forest Enterprises: A Luoi SFE and Huong Giang SFE. However, after a long period of industrial timber exploitation, in the 1990s, under new state policies and programs, these SFEs shifted their focus to restoring and replanting forests. Among other things, after Huong Nguyen's resettlement, in order to support people to stabilize their lives and attracting their participation in forest landscape restoration programs, villagers were still free to access forests to open new swidden fields or participated in tree planting activities within State entities' forest boundaries.

Around 2005, a new forest inventory and new policies led to a further suite of changes. A Luoi SFE was transformed into a protection forest management board (PFMB), focusing more on watershed forest management and protection duties. Those areas classified as production forests were redefined as protection forests, with stricter rules. At the same time, Huong Giang SFE was dismantled and merged into an adjacent SFE, becoming Nam Hoa State Forest Company, which focuses on acacia production and completely stopped logging on natural forest areas. In 2013, Sao La Nature Reserve (NR) was established from parts of A Luoi PFMB territory, and this forest area was upgraded from protection forest to special-use forests, with strict protection rules. Sao La NR is managed by a state-owned management board which strictly prohibits any swidden and forest clearance activities by villagers.

For these reasons, villagers have increasingly restricted access to forests and land. Over 93% of Huong Nguyen commune's total land area is classified as forestland (A Luoi FPD, 2019). Most

of these forestlands (92.38%) continue to be managed and protected by State Forest owners (A Luoi FPD, 2019). A small portion of those forestlands (4.38%, about 1300 hectares of natural forests) was re-allocated to groups of villagers under Thua Thien Hue's provincial forestland allocation program in 2010 (see Figure 16).

The combination of Katu traditions of land access, state-organized resettlement and land allocation, and evolving controls over forestlands by diverse state entities have co-produced fuzzy and complicated tenure regimes over every single piece of forestland in Huong Nguyen. It is in this landscape that the forestland acquisitions for acacia are taking place.

5.2.6.3 The arrival of acacia and state-led tree planting programs

Acacia appeared in Huong Nguyen shortly after resettlement in the late 1990s, around the time that the SFEs began implementing reforestation programs. The goals were three-fold: (i) to re-green barren land and increase forest cover in the area; (ii) to provide livelihoods, economic growth, and poverty reduction and (iii) to increase the future supply of wood (cf. Nguyen and Gilmour 1999). Villagers were enrolled in acacia plantation in two ways. First, the SFEs employed villagers on short-term contracts or food-for-work programs to participate in acacia tree plantation on the SFE's land. Second, the first Forest Land Allocation (FLA) activities were implemented to distribute 'barren' production forestland to individual households, requiring recipient households to plant tree seedlings (mostly acacia, but also cinnamon) chosen and provided by the state.

At this time, acacia was a completely new crop to villagers. They did not like acacia at first, elders said, because they had no particular economic nor environmental interest in it (Interview, #42, March 2019). Villagers participated in planting acacia out of curiosity and due to incentives offered by the SFEs, such as cattle for breeding, labor cost subsidies, foods, or being allowed to continue swidden cultivation if planting trees. During this period, villagers still focused on their wet-rice and swidden cultivation on the hillsides surrounding the villages and planted acacia trees only in areas planned by the State.

As a result, the total area planted in Huong Nguyen under the state-led tree planting programs was reported as over 1110 ha, but most of this area (96%) was on the SFEs' land. Only 34 ha was planted on the villagers' allocated forestland (Thua Thien Hue FPD, 2019).

The situation changed dramatically over the last two decades, as villagers invested massively in commercial tree plantations, especially acacia. In our surveys, 90% of households confirmed they have acacia plots, with areas ranging from 0.1 – 10 ha. Medium and rich households have at least 2-3 ha of acacia farm, excluding rubber and other crops. In contrast, for the poor households, their acacia cultivation area normally less than 1 ha and fragmented, consisting of several plots in

different locations. Villagers recounted that this practice had been unimaginable to them, even until 2005 when acacia was still perceived as a forest tree planted for the state purposes. 73% of households stated that they only started planting acacia on their own land after 2005.

On which land are the villagers growing their acacia? Just as in some other localities in Thua Thien Hue province (cf. La, et al., 2020), surveyed households shared that their acacia farms could be established on different types of land: post-war barren and degraded land, old swidden fields, or converted from other land-uses, such as: wet rice paddy, home gardens, along village roads or most recently rubber plantation areas and even in natural forests. All 91 households also expressed their interest in planting more acacia were more land available. At current trends, it is clear to all that the area of acacia plantations will continue to increase in coming years [Interviews, Feb-April, 2020].

Officially, according to the Huong Nguyen CPC, at the end of 2019, the area cultivated with acacia by villagers reached 650 ha, 19 times more than the area planted in 1996. The local forest ranger, however, stated "*I am sure the area is much larger. But with the current method, it will be tough to determine exactly. Villagers usually make use of every single piece of land, everywhere and often convert their other cropland to acacia*" [Interview #20, January 2019].

So why have acacia plantations taken off in Huong Nguyen? Acacia was attractive to villagers after they saw their kin and neighbors succeed. As one former village head explained, "*My family planted acacia in 1997 with the seedlings supported by A Luoi SFE. In 2003, the trader came and paid me 35m VND (2200 USD)*[26] *for my acacia. It was the biggest amount of money I had ever seen. The benefits from acacia not only inspired my family to continue our next rotation but also our relatives and neighbors to follow suit*" [Interview #15, Feb 2019]. The livelihood rationale for the farmers to undertake acacia plantations is clear. For households who had already harvested acacia, the gross revenue represented about 25-50% of total income, making acacia the most significant and stable income source for Huong Nguyen's households. In addition to the benefits of selling one's own acacias, the regularly available wage labor for planting, nursing, or harvesting acacias – well paid around 200,000–250,000 VND/day (8.6 – 10.7 USD)[27] – has provided a significant additional daily cash income for households and the main source of income for the poor and landless (who account for 36.26% of surveyed households). As a result, many villagers no longer emphasize their own food crop subsistence needs. Out of our respondents, around 20%

[26] 1 USD = 15.868 VND, according to Vietnam Foreign Trade Bank in the end of 2003. Source: https://bit.ly/3drQcv9
[27] 1 USD = 23.230 VND, according to Vietnam Foreign Trade Bank in the end of 2019. Source: https://bit.ly/3y6K3MQ

do not have or save land for food crops anymore, while most buy foods from village stores for 3-12 months per year.

The uptake of acacia has been facilitated by its ease of cultivation, by the ways in which it can be integrated into local cultivation systems, and by state and project subsidies. Villagers rely on techniques born out of their traditional slash-and-burn practices. To open new fields, this involves cutting and burning the vegetation, using the resulting ash as fertilizer. During the first years, when acacia seedlings have not yet closed their canopy, villagers grow food crops like rainfed rice and casava between them. Acacia was found to be very easy to grow and easy to manage, even with limited financial and technical resources. Based on our interviews, not only the rich, well-off households, but also the poor are likely to participate in acacia plantation, although the scale maybe smaller. Villagers can easily purchase seedlings from traders, or from Binh Dien town 20 km down the road. In cases where people do not have money to buy seedlings, they can use seeds from previous crop or from their neighbors. Acacias seed well on their own, especially after fire: "*I had no intention of planting, but when we burned our farms, it grew on its own. When the tree got older, I just pruned or removed the stunted trees",* one villager shared [Observation, March 2019]. Acacias in Huong Nguyen are often planted at a higher density than recommended by silviculturists, around 4000-6000 seedlings/ha. According to the villagers, a higher density will generate a larger quantity of timber at harvest. Trees are often harvested at the age of 3-6 years. Afterwards, villagers start a new cycle in the same location, burning the slash and re-seeding or replanting acacias.

Over the past three decades, the wholesale uptake of acacia tree farms has transformed livelihoods and landscapes not only in Huong Nguyen but also in many (if not most) villages away from the coastal plains in central Vietnam (Tran et al. 2014, Sandewall et al. 2015, Maraseni et al. 2017, La et al. 2020). Villagers have transitioned from being subsistence-oriented swidden cultivators to being enrolled in the highly market-oriented production of this commercial crop. These dynamics were initially catalyzed by changes in the larger political-economic environment, as well as resettlement programs or state-led forest use and management policies. Yet these state-led interventions were embedded into a local context, and appropriated by local actors, leading to dynamics influenced by diverse local factors, like livelihood aspirations and power relations. Villagers are not passive state subjects but instead key political actors embracing new opportunities available to them, as the following section illustrates.

5.2.7 Land acquisition through bricolage in the boom

The acacia boom developed in Huong Nguyen simultaneous to state policies seeking to close the forest frontier. Increased land hunger in a context of reduced access led to diverse strategies for land access. These strategies, combining formal measures and daily piecemeal actions, have taken place all around the commune. To better understand these bottom-up processes, we describe here the different mechanisms by which villagers gain access to land and the tools they used to maintain or secure their land control acacia production.

Villager land acquisition has, over the past 25 years, relied on both traditional tenure institutions as well as state-led programs and procedures. The convergence of evolving informal and official tenure institutions gave rise to 'tenurial bricolage' (Cleaver 2002, 16), in which villagers, instead of resisting or sparking conflicts (To 2007), take advantage of the points of convergence – between state and local existing tenure institutions – to produce new land access opportunities. Such evolving strategies can be gathered under what we call land acquisitions through 'bricolage' (Table 17). They include (i) Enclosure, or the privatization of previously state or common land, particularly at the early stages of the boom; more intensified and competitive approaches as land hunger increases such as (ii) Property Fraud and (iii) Encroachment; and more recently, a larger scale and strategic approach through (iv) Reclaiming Negotiation. We detail each below.

5.2.7.1 Enclosure

The enclosure of state or common land for private acacia plantation has occurred since the resettlement in 1996 and brought a significant modification to the overall land distribution in Huong Nguyen. We distinguish between several forms of enclosure, based on the use of different formal and informal tenure systems, including (i) customary assignments, (ii) state land allocation programs, and (iii) a patchwork between them.

Table 17 - Mechanisms of land acquisition observed in Huong Nguyen
(Source: Synthesized by authors; and see text for detailed explanation)

Mechanism	When	Type of land	Scale (ha)	No. of households involved (out of 91 surveyed)
Enclosure				
Customary assignment				
• *Traditional swidden access*	1996-2005	Swidden land	3-7 pieces, or more small pieces/HH	91

State land allocation				
• *Land allocation after resettlement*	1996-1997	Residential land	1 ha/HH	5
• *Forestland allocation for re-greening barren hill program*	1996-1997	Forestland	1 ha/HH	6
• *Land allocation for rubber plantation program*	2003-2005 2008-2009 2011-2013	Agricultural land	0.2 – 5 ha/HH	81
Mixed enclosure approaches				
• *"Untitled but not informal"*	2003 - 2014	Unused land (Barren hills or forests)	0.2-5 ha/HH	46
Theft and Fraud				
• *Property Fraud*	1996-2014	Old swidden fields	0.2–5 ha/HH	11
Encroachment				
• *Intimate encroachment on private land*	2014	Acacia farms	Some lines of acacia	7
• *Intimate encroachment into community forest*	2011	Natural forests	0.1-2 ha/HH	5
• *Encroachment into state forests*	2014	Natural forests	Some lines – 2 ha	4
Reclaiming negotiation				
• *Collective Reclaiming*	2016-present	State Forestland	Large areas (100 – 1000 ha	91

a. Customary assignment

When acacia arrived in Huong Nguyen, all of the villagers still subsisted mainly on swidden cultivation. The custom-based claim that the "*land within Huong Nguyen's territory belongs to villagers*" [FGD #1-8, April-June 2019] served as the primary foundation for determining villagers' access to a new swidden land. All villagers were seen to have rights to acquire land freely for swidden cultivation, based on the rule of "first come, first serve". Once a specific plot of land was chosen and cleared for cultivation, it automatically belonged to the household that worked on it. This claim was then maintained not only during the cultivation period but also during subsequent fallowing (cf. Bayrak et al. 2013). Villagers used natural boundaries, such as rocks, big trees, streams, etc., to mark and relatively define their land. Villagers' claims to land was mainly guaranteed through word of mouth and witnessing by nearby villagers and village councils without any official documents.

Opening new swidden fields is a significant labor investment and linked closely to family size (cf. Sikor 2001, Sikor 2004). Households with more labor resources or hired labor could, therefore, acquire more swidden land. Fallowing practices also mean that households have multiple plots. Individual plots were typically not very large, enough for household self-sufficiency. As a result, when these swidden lands were converted to acacia, a fair number (42% of those surveyed in our interviews) were of small size, less than 1 ha. Most households (87% of respondents) have 3 to 7 or more pieces of acacia land acquired this way.

The initial asymmetries in land access influence later generations, especially when land becomes scarce as it is today. Land access is considered very important for the security of future generations: "…*when our children get married, we give them 1-2 plots of land*" [Interview #25, Feb 2019]. At least 30% of our interviewed households indicated that some of their acacia lands were inherited from their parents. However, some complained that "*My parents do not have much land and we have many brothers and sisters. For those who got married first when there was a lot of available lands, they inherited and also had opportunities to occupy more land…in our turn, there was not much land left"* [Interview #20, Feb 2019].

These original swidden fields have now been converted to different land-uses, especially acacia plantation. This mechanism was most relevant at the time when villagers were resettled to new Huong Nguyen, when they could justify their actions to the state by citing their subsistence needs.

b. State land allocation mechanism

State-led enclosure mechanisms have played an increasingly crucial role in villagers' access to land in Huong Nguyen. Through three main programs, including Resettlement (1996-1997), Forest Land Allocation for Forest Rehabilitation (1996-1997), and Smallholder Rubber Plantation (2003-2010), the district authorities allocated and then provided official land-use certificates to a large proportion of 'unused'[28] land to villagers.

The state-led enclosure mechanism took place first in the form that applied the principle of egalitarian distribution and allowed households to register for their own plots. For example, villagers received temporary land certificates, so-called Green Books, for the forestland that had been allocated to them by the district-level forest protection unit and nearby SFEs in 1996-1997. The households could later request the issuance of Red Books through several other government rural development programs or self-finance. The situation was similar for the residential and rice

[28] Unused land is understood as the type of land that has not been assigned to anyone, nor in any other land-use plan. According to the official system definition, even people's swidden land is said to be unused land (cf. McElwee, 2016).

paddy plots allocated under the resettlement program. As a result, only a minimal amount of residential land (1%) or rice land (8%) currently does not have a Red Book[29].

It was different with swidden fields. Villagers retained only customary claims to those lands at least until 2003-4, when the first smallholder rubber plantation program was implemented. Since Red Books were required as a pre-condition for access to plantation loans, many customary swidden fields were formally converted into fixed agricultural land recognized by the State. The result is a high rate of formal documentation of rubber land (81%[30]) and acacia land (46%) in the swidden areas enclosed under customary assignment above.

Although most of these programs were not initially related to commercial acacia plantation, they provided villagers with opportunities to access land resources. Unlike customary assignment, this state-led mechanism provided a strong guarantee for household land claims through Red Books. The land title is valid for 50 years with specific maps, boundaries, and areas. Each landowner is given clearly defined and exclusive rights to the land, including exchange, transfer, inheritance, mortgage, and lease. This formal system nowadays has gradually demonstrated its advantages and is valued by villagers as a powerful tool to maintain and guarantee access to land, "*with Red-book, the land is our property. It is legal. We can also use this red book to mortgage the bank to get money in production*" [Interviews #38, March 2019]. The result is that villagers have a new perception of the land value.

"Untitled but not informal" or gray enclosure

Signs of this third, different type of enclosure had begun to emerge in 2003-4, as the new rubber program was being implemented, and concurrently, villagers had begun to see acacia's economic value. "…*Responding to the local government's call, we contributed our land to plant rubber. But it takes up to 8 years to get income from rubber. We need land for other crops, such as food crop and acacia*", according to group discussions [FGD #1-8, April and June 2019]. To achieve the program's goals while abundant land existed for conversion, local authorities agreed for villagers to open new farmland. So until 2010, there was generalized 'free-for-all' on land within Huong Nguyen territory.

More than 13,000 hectares of land, defined as unused in 2006 (CRD, 2006), have been converted into other land-uses. Due to errors in official statistics and maps between the forestry sector and land-use management, it is difficult to determine exactly what this area is nowadays. However, it clearly involves a large proportion of the A Pro and Khe Tom valleys, two of the main acacia

[29] Calculated based on the land area survey of 91 interviewed households, not on the whole commune.
[30] As above.

plantation zones of Huong Nguyen (see Figure 2). 52% of our respondents confirmed that part of their acacia land was established during this period and located in these production areas.

However, our household data also reveals that more than half (54%) of acacia plots in these areas, despite existing for over a decade, are yet to be officially certified. Why? What happened was that people often tended to expand their land claims around their registered rubber planting areas, in order to save land for their children. Much of these areas were natural forests or barren lands intended for forest development in the future. Local authorities, therefore, fell into a dilemma. On the one hand, they could not issue certificates for areas that are in a state of "conflict" with the Government planning, thus creating a precedent for land grabs; yet it was also impossible to force villagers as a whole to give up and rehabilitate their forests they had destroyed. The local authorities, therefore, tacitly accepted the status quo. 'Untitled but not informal' is what we called this situation.

The mechanism thus combines customary assignment and state-led allocation. In particular, the state programs were used as a strategy to pave the way to gain access to land, while customary traditions legitimized household claims to adjacent land they had cleared based on their available resources. "…*when a lot of (forest)land is still available, those households that have access to information about acacia, better labor condition, or financial capital to buy equipment (such as chainsaw) or hire labor have a first mover advantage*" [FGD #4, March 2019], they could get the "first-mover advantage" to enable them to occupy more land for their farm. Land areas involved in this enclosure mechanism were as a result larger than in the previous period, with many plots in the range of 3 to 5 ha.

Under this mechanism, with neither a legal guarantee of land-use rights, nor relevant customary rules, villagers created new tools to maintain their control of the land. For example, they built fences – and in some cases trenches – around their land. Impermanent or vague boundary markers for swidden fields – like for instance trees which could be cut or might lean one way or the other - have thus been replaced by fixed and delineated ones. Households also constructed shelters at their fields and stayed there during clearing, planting, and harvesting time to save time but also to "…*asserted their sovereignty over land and avoided encroachment by other villagers*" [Interview #15, Feb 2019].

5.2.7.2 Theft and property fraud

Due to the fuzziness and co-existence of these two systems, property fraud emerged as another mechanism. Under the customary system, cultivated land, even during the fallow period, still belong to the initial cultivator. Yet official procedures ignored such rights; customary land claims

were recently considered illegal and had no value compared to State land-use certificates. In the land rush for acacia, several households resorted to formal regulation when the latter became stronger in order to steal land from each other. "*This area belonged to my family. It was in the fallow period. We do not know since when…but our neighbor has a red book for that land. Of course, by law, it's theirs now. We cannot get it back*", shared by a villager at a focus group discussion [FGD #3, March 2019].

5.2.7.3 Encroachment

The boom in acacia plantations faced a new set of challenges related to the further tightening of the forestland frontier starting in 2010. This included policies and actions like the new round of forest planning and new State forest conservation intiaitives (Dang et al, 2011). Villagers felt that all remaining land, including natural 'poor' forests considered suitable for acacia plantation, were now been placed under protection. This situation, combined with population growth (2-3%/year[31]) and the completion of land distribution under the mechanisms described above, reduced opportunities to access to new farmland for villagers. The result was that villagers started to expand their farms through gradually encroaching into adjacent areas.

In contrast to the enclosure mechanisms, encroachment is completely illegal whether according to the customary or state system. Based on our household interviews, encroachment happens on land with diverse types of owners: villagers' farmland, community forests, and state forests. It could manifest as a few rows of trees into an adjacent household's plot, or a patch of acacia planted in the middle of the forests and then further encroachment around. Encroachment takes advantage of acacia's characteristics as a fast-growing tree with good survival, in that the species itself has become a vital 'tool' or 'green machete' to take down other crops (cf. Rocheleau and Ross 1995). One could thus say that it is not only about land for acacia, but also acacia for land.

[31] Huong Nguyen CPC, 2019.

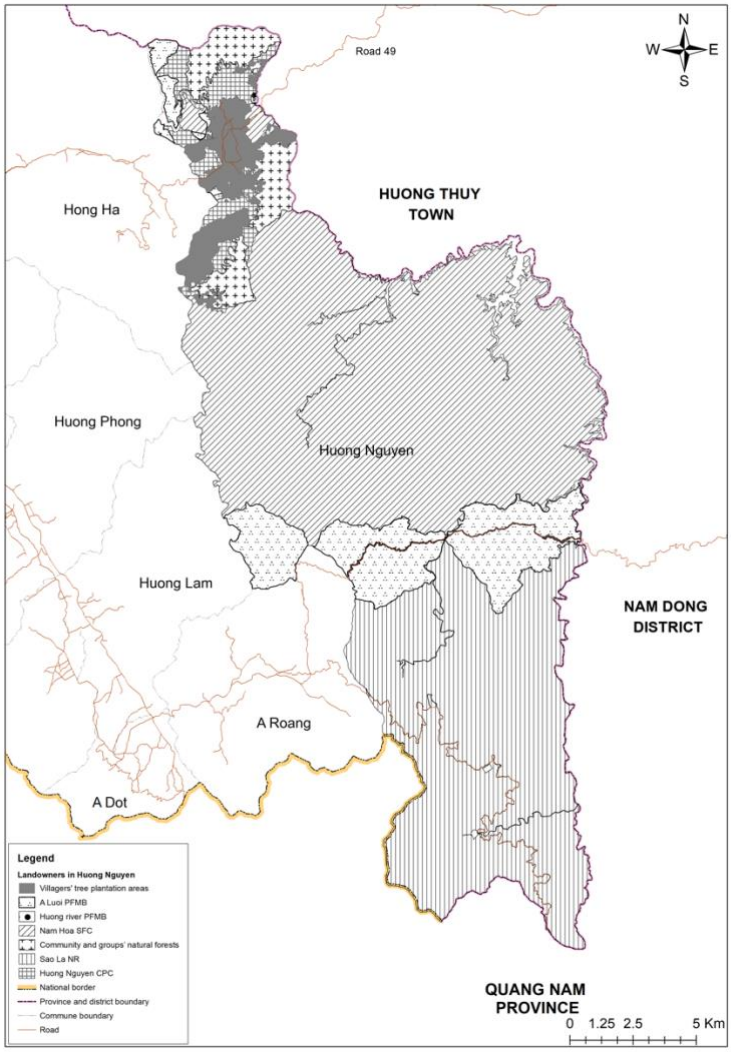

Figure 16 - Villagers' acacia plantation areas among other forestland owners

Source: Synthesized by authors from official spatial forestland ownership data (A Luoi FPD, 2019) and field observation.

This mechanism is often piecemeal and difficult to detect. In the case of encroachment into state or community-owned natural forests, the typical strategy includes several steps. Villagers usually plant acacia on deforested land, grasslands or in poor-quality forests (without big trees) as less labor is required. Or, in natural forest areas, villagers initiate illegal logging to cut down all big trees before planting acacia (they may do the work themselves, hire people to do so, or facilitate outside loggers). As a result, acacia plots are established and can even be expanded annually. For their efforts, villagers can gain the income from their acacia for at least 1 or even 2 rotations without any permissions or property rights, neither in formal or informal systems. As a result, acacia plots are found scattered around the forestlands, like spots on a leopard skin.

The rejection of the new state forest protection rules and intimate social relation among villagers have contributed to their ability to implement this mechanism. First, the risk of being caught while

clearing forest is small. Other villagers and even the state forest owners do not have enough resources to enforce the protection legislation effectively. According to community forest protection team leaders, "*with the forest protection subsidies (600.000 VND/ha/year), we can only patrol forests once a month. Villagers often take advantage of the remaining days to clear forests and plant acacia. And it is impossible to identify who did, and villagers even protect each other*" [Interview #32, Feb 2019]. Second, it is difficult for villagers inform the authorities when the offenders are their neighbors or relatives. The 'ghost owners' are how the local forest rangers call these villagers.

5.2.7.4 Reclaiming

A final mechanism we have identified could be called 'reclaiming'. As mentioned above, the high financial benefits have rushed villagers to hunt for land to expand their individual household acacia farms. Not only households themselves, local authorities, and local forest management agencies have realized that 'land hunger' is present here. In fact, the local villagers themselves have initiated some solutions to regulate land among siblings, such as lending land, sharing, sparing, or inheriting. At the same time, local authorities, since 2017, with the supports from district authorities and NGOs, have also tried to come up with some solutions to limit the expansion of acacia expansion and toward sustainable land-use management through diversifying livelihoods strategies, promoting off-farms activities programs, or new local rules on land. According to Huong Nguyen CPC's resolution 2017, each household is only allowed to have no more than 3 ha of acacia plantation. The excess area will be re-distributed by the government for landless or poor households. However, all of these solutions are low efficiency or completely unenforceable, "it's really not easy to get people to give up their individual financial interests, even among their relatives or family members" [Huong Nguyen CPC officials, Feb 2019].

Consequently, with more than 92% of Huong Nguyen's land under the management of the nearby State owners, this 'land bank' becomes the only source of hope to satisfy the villagers' land hunger. Huong Nguyen villagers, recognizing and playing on recent political developments, are increasingly adopting a much more strategic mechanism. "*The traditional land of Huong Nguyen was very large, accounted one-third of A Luoi district… but the State occupies almost it while we are bounded in the middle… Such a paradox!!! The State should give land back to people because we are hungry for land*" – is the message that Huong Nguyen's villagers repeatedly send to the authorities at all levels through various channels, through NGOs that have projects in their village, through the press, through forest rangers and through annual meetings with National Assembly members [Observation, April to June 2019].

One result of such claims was in 2016, when A Luoi FPMB gave back about 167 ha planted forest to the commune. The area is where villagers had participated in the reforestation program under contracts since the late 1990s. The local authority had planned to redistribute these areas in an egalitarian way to households lacking land, mostly the newly established ones. However, as those land become more valuable and scarcer, the plan met opposition from many other villagers who tried to re-claim their parent's contribution to that land. No consensus has been reached for 4 years. Villagers again rejected the attempt to redistribute land. Instead, they insisted on reviving customary assignment, especially the "first come first serve" rule, to retain that control over that land.

After nearly 20 years of land privatization for commercial acacia plantation, one might assume that all customary rules on land in Huong Nguyen have been gradually replaced. In fact, in the context of land hunger, the customary rules and perceptions about traditional territory have recently return and become stronger. According to the people, they did not use to pay much attention to boundaries and territories. However, as land became increasingly scarce, especially as the forest territories of state owners become stricter and tighter and with the emergence of mobile technology and maps, then this is when villagers know for certain the extent of Huong Nguyen's territory. "*I did not know where Huong Nguyen's land was until the government recently surveyed and allocated the forest to our community ... It turns out that a lot of Huong Nguyen's land was occupied by people in Hong Tien (neighboring commune) who then occupied and planted acacia*", shared by one leader of forest protection group [Interview #10, January 2019]. According to villagers, land within Huong Nguyen's territory should be held by Huong Nguyen people. Villagers can decide among themselves how land can be distributed among members, exclude outsiders (like Kinh people[32] or people from another commune) and regulate land use. The village councils made rules stating that outsiders are not allowed to own cultivation (acacia) land in Huong Nguyen. Villagers are not allowed to sell land to outsiders. "…*we don't have land…If we keep selling, we will not have land for the future*", one elder emphasized [FGD 1-8, April – June, 2019]. Households in violation will no longer be involved in any land distribution plan, neither state or customary assignment in the future. In the cases where outsiders are found to be planting acacia within Huong Nguyen's territory, the village council requests the return of land even if they already have a formal land-use certificate. If they do not comply, villagers will wait for the harvesting period, or even they destroy them, and then they quickly plant their own acacia – as a new way to assert sovereignty and take the land back [Observation, April 2019].

[32] Kinh people is majority group of Vietnam. Kinh people in Huong Nguyen are quite few, making up only 1-2% of the commune's population. They often work at the Committee or open shops to sell basic necessities.

Additionally, in some villages, some small public common lands are still available for collective management. These lands exist for several reasons: through a set-aside at the time of founding of the village, through the village working collectively to clear or claim new lands, or through allocation to groups of households for forest protection. These common lands are managed by the collective and for raising money. For example, in Chi Du village, a small area is retained collectively and planted with acacias for raising money for their village feasts and celebrations [Observation, January 2019]. The same occurs for forest protection lands managed allocated to groups of households. A total of 23 groups of households and one village received 1300 ha of natural forest and received payment for forest environmental services (PES) as a subsidy for their efforts to protect forests. These areas are managed collectively by groups and benefits are also shared based on the participation of each member.

5.2.8 Discussion and Conclusion

The case of Huong Nguyen highlights the complex dynamics of land acquisition by upland ethnic smallholders operating in a booming forest sector linked to state efforts to develop and transform the economy, society, and the forest environment. Acacia plantations initially arose three decades ago due to state-led interventions for reforestation and re-greening barren hills, coupled with a devolution process that awarded property rights to individual households. In the past decade and a half, acacia plantations have boomed in tandem with the forest products economy, and villagers have been front and center in this process. The villagers, whether better-off or poor, whether old or young, are hungry for land. They have thrown themselves into a land hunt with intense competition among neighbors and kin and with nearby state landowners. To acquire land for acacia, villagers are navigating and making creative, resourceful use of multiple formal and informal relations, traditional and regulatory institutions, all in an evolving historical context.

Our analysis reveals the subtle ways that small-scale land acquisitions occur through bricolage, in which villagers make use of a repertoire of formal and traditional institutions, resources and tools in order to access to land for commercial acacia plantation. The resulting mechanisms – ranging from customary assignment to formal state land allocation, and from encroachment to collective negotiations to reclaim land (Table 18) – emerge at different periods in time and with respect to different geographical territories. Our focus on ‘bottom-up’ agency showed in detail how villagers have opportunistically sought strategies for land access across these periods and territories. They practiced tenurial bricolage, mixing and matching local claims anchored in custom or social proximity and formal claims arising from national laws or regional policies. This bricolage allowed villagers to build (or rebuild) their land access portfolios, in part by creating gray areas at the convergence points between the customary and the formal. It is a fluid, fast-

evolving arena where activities are carried out piecemeal and (re)produced based on the understandings of villagers about the existing tenure institutions, their local power relations and their suitable application to different parts of the landscape they are living. Another way to look at it is to see villagers as involved in a process of 'co-production' (Forsyth 2020), where state strategies are translated through scaled institutions and interests, then becoming embedded in and part of local strategies to support local aspirations for poverty reduction and development, and then produce new land access opportunities.

Two points of relevance emerge for discussions of 'land grabbing'. For one, in the context of commodity booms, rural smallholders can be key land acquisition actors to pay attention to. In this case, such a phenomenon was made possible under certain political and economic frameworks somewhat unique to Vietnam. Attention to the unfolding of mechanisms of land acquisition by local villagers provides a crucial window into land access dynamics that – in their cumulative effects – can cover large areas and touch many people.

Second, state interventions to forward economic development and environmental conservation by drawing boundaries in the forest and specifying activities that are allowed or not allowed are often perceived as 'from-above' resource grabs. Yet our case shows that sometimes such interventions are embraced with local complicity and participation. This is in contrast to other regions of Vietnam, where case studies in the northwest highlands (Sikor 2011; Sikor 2004; Hall et al. 2011) and in Ha Tinh province (McElwee 2011) recorded that these state-led interventions were perceived as "robbery", as large-scale land acquisitions. Indeed, in some areas, authorities colluded with village-level officials to manipulate and keep locals from gaining access. This exclusion sparked resistance efforts to state schemes. The case of Huong Nguyen, however, demonstrates an opposite outcome: state-led reforms do not necessarily result in the exclusion of upland villagers, and villagers do not necessarily respond with resistance. Rather they seized the opportunity to build and shape their individual land portfolios. Twenty-five years after resettlement, people in Huong Nguyen, are not passive subjects or victims excluded from land access for state plans, but key political actors in the land acquisition process, a process enacted 'from above' by the State at the beginning but then implemented and expanded 'from below' by villagers (cf. Hall et al. 2015).

These new dynamics reflect and are reflected in transformations to rural agrarian lives and livelihoods. De-collectivization, privatization under devolution, neoliberal economic restructuring, and market forces have presented challenges and opportunities to rural Vietnam (McElwee 2011; Leisz et al. 2011; Nghiem and Yanagisawa 2011; Sikor et al. 2011; To et al., 2019). The mechanisms for land acquisition that we document here suggest that villagers are

making numerous economically-based decisions at the same time as they continue to value the local moral economy (such as labor reciprocity, traditional access institutions, or collective efforts at reclaiming state forestlands). However, even if most villagers are participants in the acacia boom, there are clearly winners and losers in the scramble for acacia land (La et al., 2020, for example). Such dynamics of social differentiation merit further attention in future research.

Concerning 'forest transitions', the dynamics we detail in this paper are also an important contribution to understanding the processes underlying a transition from deforestation to reforestation. The development of smallholder tree plantations has been recognized as a main driver of increased forest cover, though in some cases at the detriment to natural forest (Cochard et al. 2020; McElwee and Tran 2021; Meyfroidt and Lambin 2008; Rudel et al. 2020). We reveal the complex land access mechanisms behind the acacia boom, unearthing a variety of forestland governance processes and issues 'under the canopy', so to speak, of the statistics of increased tree cover. Furthermore, we show that a trend to greater tree canopy under expanding forest plantations can be representative of local empowerment (under certain conditions).

State reforestation strategies, one could argue, have been almost too successful, sparking a commodity boom and land rush linked to a single exotic tree. Acacia has undoubtedly been a motor for local livelihoods, but it has also led to fragmentation of natural forests, land struggles among villagers, and conflicts with forest protection and conservation efforts. We conclude that a stabilization of land access – in ways that are recognizant of the interests, future visions, and historical claims of upland residents, and that are equitable among them – accompanied by support for more diverse livelihoods will be crucial to the development of a sustainable, multi-functional landscape in future.

A take-home message for on-going campaigns, such as Bonn Challenges, 10 billion trees or zero-deforestation as we see across the globe is that they need to seriously consider the mechanisms and land dynamics underlying how restoration and reforestation will occur in a diversity of local contexts.

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CHAPTER 6

New forests, new people in a ‘landscape of transition’

6.1 Preface

The chapter is the last of the empirical sections in the dissertation. While the previous chapters focus on FORESTS and INSTITUTIONS, in particular the making of the forest transition (Chapter #3), and its recent dynamics in terms of governance and land control (see Chapter #4 and #5), this chapter focuses on PEOPLE. It hence answers the last research question of the dissertation: What are the impacts of the FT-making process on local people and their livelihoods?

Rooted like the rest of this dissertation in a Political Ecology approach, I seek to shed light on local people's agency, identity and behaviors within the changing landscapes under successive state policies and interventions toward forest transition. Exploring the formation of new forest people in the 'landscape of transition' is the main aim of the chapter. In short, who are these new forest people? Using the well-known concept of 'Environmentality' by Agrawal (2005), I examine how villagers become 'environmental subjects' as they have participated actively in state-led policies and interventions over the last three decades and adopted conservation attitudes and behaviors and new identities to foster forest changes. I then examine how local villagers have re-constructed their forest practices, forming new forest livelihood patterns.

In doing so, the chapter also illuminates the trajectory by which the effects of successive state policies and interventions and the socio-cultural, contextual, and idiosyncratic factors of the particular locality are integral to shaping both individual subjectivities and village politics surrounding forest change dynamics. Moreover, the chapter explores people's sense of belonging, their local identity, and their fantasies of modernity. Together, these investigations can be as one way to examine the vulnerability and resilience capacities of local villagers in the face of dynamic change in the hope of sustainable development.

Authorship Statement: Corresponding author

Status: Consider to xxx Journal, xxx

6.2 Paper

Title: **New forests, new people in a 'landscape of transition'? The formation of environmental subject in the contemporary Vietnam's uplands**

6.2.1 Abstract

Vietnam's upland forests and forest people are in transition. Underneath the superficially smooth curve of forest cover statistics, a complex social transition has been taking place. State policies and interventions have worked for decades to refashion upland forests according to current needs and to turn upland dwellers, often of ethnic minorities, into ideal subjects. I ask how do uplanders, whose culture was previously based on shifting cultivation and hunting, deal with these changes? Based on ethnographic fieldwork in the uplands of Central Vietnam, I show that successive state interventions have established a system of strict rules protecting forests, banning and transforming local forest practices, but also providing economic opportunities from both commercial tree plantations and forest protection for local villagers. The villagers have been enrolled actively in this state-led process of 'making' forest transition making process and adopted new forest management attitudes and behaviors. However, beyond 'finding a way to live', individual aspirations toward modernity and the pride of the ethnic identity have inspired local villagers to form new forest livelihood patterns and gradually become new forest people. this paper discovers how new 'subjects' with their own environmental subjectivities have emerged. It also investigates the vulnerabilities and resilience capacities of local people in the face of dynamic changes. This piece, therefore, hopes to contribute to a fuller picture of the making of a forest transition in practice.

Keywords: Environmentality, identity, agrarian change, livelihood strategies, Upland, Vietnam.

6.2.2. Introduction

"*Forest are gold…*" (Ho Chi Minh 1962)

"*The forests protect the soldiers, the forests besiege the enemy*." (To Huu 1954)

These verses might be about a poet's perspective, but their eloquence shows the important role of forests - which enclose the person, the villages, even nations in Vietnamese history. In a similar vein, the forests of A Luoi district (spanning part of the Truong Son mountains, also known as the Annamites, in Thua Thien Hue province)[33] play a very important role in people's lives. The region is home to Katuic ethnic minority groups, including the Katu, Taoi, Pako, Pahy and Bru-Van Kieu (Pholsena 2008). Before and during French colonialism, most of the ethnic minority groups in A Luoi were relatively isolated from the rice-farming policies of the low-land, or the Kinh people[34]. Local people there have a long history of living off the land with shifting cultivation and forest products.

Fifty years ago, these forest regions were front and center in the war (Robert 2015). The forests were strongly affected when American planes sprayed Agent Orange, dropped bombs and fire, and set up short-lived bases, seeking to stop North Vietnamese supply chains along the Ho Chi Minh trail (ibid.). During this period, local people here mostly supported the North, and had to leave their homes and hide inside the dense forests. Local people only returned when the war was winding up in the mid-1970s. Since the war, especially from the mid-1990s onwards, the Vietnamese Governance has implemented successive forest-related and poverty alleviation programs in order to restore the landscape and promote development in A Luoi (Tran et al. 2017).

Arriving in A Luoi district in 2017, we encountered a place in the throes of transformation. What one sees in A Luoi today is radically different from the post-war forest landscape. It is instead on its way to becoming a 'new forest' landscape. On the way from the district center to the village, we saw evergreen tree plantations on both sides of the roads. Food crop fields (such as rice and cassava) and natural forest patches had disappeared from the hill slopes. A complex mosaic of swidden fields, bushes, young trees, and forests has given way to a more simplified and compartmentalized landscape. Tree plantations, notably Australian acacias and rubber had appeared near people's houses and village roads and covered many of the slopes around the village. Surrounding the back of the villages were the remaining rich, natural forests under strict

[33] Truong Son Mountain or the Annamite Range is a major mountain range of easter Vietnam, bordering with Lao PDR. It is biodiversity hotspot with many endemic species that can be found there, such as Saola (*Pseudoryx nghetinhensis*), a type of forest-dwelling bovine, the Annamite striped rabbit (*Nesolagus timminsi*) and the large-antlered (*munticaus vuquangensis*) and Annamite dark muntjacs (*Muntiacus rooseveltorum/truongsonensis*) – were only discovered by science in the 1990s.
[34] The majority group live mostly in the Lowlands of Vietnam.

protection and management by different forest owners, including state-owned entities and local villagers.

Within the landscape of transition there are not only new forests under construction, but also new lives. The roads leading into the villages are no longer muddy tracks. These are now made of concrete, to serve large trucks with construction materials and to trade acacia rubber and rubber latex from villagers. The houses in villages are no longer simple structures from wood and palm leaves, but are now built from concrete, with a second floor similar to the style of houses popular in Kinh communes. Many households have electric fans, rice cookers, fridges, color televisions, hi-fi stereos and all types of modern equipment. It is not uncommon to see young villagers using modern smartphones and Wi-Fi/4G services everywhere.

> "*We are ethnic minority people (người dân tộc). But we are no longer working on swidden cultivation, illegal logging, or hunting. We are smallholder tree growers. We play a role in helping the state in their efforts to protect forests and re-greening all barren hills surrounding here. The (acacia and rubber) tree plantation is now a crucial part of our livelihood. We also participated in many forest protection programs and were allocated natural forests for our own. We have our new lives*" [Group discussions #8, April 2019].

What I observed was totally different from the general portrayal of the upland forest region devastated by war. The transformation of the landscape, as well as the changes of local people and their livelihoods, hints at a number of crucial questions. When and why do villagers come to change and care about the forests? How do they think about their actions in terms of their lives in the changing forest landscape? Therefore, in this chapter, we explore the dynamics driving these dramatic changes.

We employ the notion of *environmentality* proposed by Arun Agrawal (2005), also labelled 'environmental governmentality', 'eco-governmentality' and 'green governmentality', as a tool to understand changing forest actions and thoughts among individuals and communities which in turn serve the interests of external actors, such as the government. The government, through discourse, policies, and practices, has sought to shape certain kinds of forests and people (McElwee 2016). These government strategies thus create 'environmental subjectivities', a term that refers to individuals internalizing new ways of thinking that lead to new identities and actions. In doing so, they become a type of 'subject' that furthers government aims without necessarily being aware of their complicity in those objectives – when the individual becomes an instrument of government by self-regulating their behavior to further the objectives of the governing body.

Agrawal (2005) has three analytical foci: the institutionalization of conservation, ensuring village politics, and environmental subject formation. He, however, neither considers villager' livelihoods nor the socio-cultural context or idiosyncratic factors that seem also integral to shaping both individual subjectivities and village politics surrounding forest conservation (Acciaioli, 2008; CEPEK, 2011; Singh, 2013). I adopt the livelihood aspect in the paper.

In addition, I also integrate the notion of 'fantasies of identity' into the 'environmental subject' framework. This is understood as "*ideals about the kind of person one would like to be and the sort of person one would like to be seen to be by others*" (Moore, 1994: 66). According to Jones (2011), the forest, people and their forest-based activities are presences that articulate practice, memories of the place, and history, which together signify forms of identity and a sense of belonging for people. The 'fantasies of identity' thus helps me to discover the implications of these changes on people's subjectivities, by examining how villagers reposition themselves in wider matrices of values. My approach takes a particular interest in the interactions between the state strategies, the villagers' livelihood strategies, and their ideas about their own personhood and identity.

In short, in this paper, I focus on describing the new 'environmental subjectivities' of A Luoi district and how and why they have been formed. The region has been described as a site of 'best practices' in its transformation from a post-war landscape to forest conservation-production clusters (Schafer et al., 2020). State interventions facilitated villagers' engagement, including the provision of economic incentives in the form of alternative livelihoods from smallholder tree plantations and from forest management contracts. These opportunities were shaped to a large extent by policies like large-scale restoration programs, forest land allocation, community-based forest management, and payments for forest ecosystem services (see Chapter #3). In this paper, I examine how local communities responded to different state interventions and the implications of this on transforming local lives. Evidence is drawn from previous literature and fieldwork using ethnographic methods (observation and participation, supplemented with in-depth interviews and focus-groups) conducted from January to June 2019.

This article thus contributes to the literature by determining how 'new forest livelihoods' play a key role in creating different modes of forest governance and different forms of new environmental subjectivities (e.g., the means through which individuals act towards forests). Going beyond an approach of *environmentality* that focuses on the impacts of state-centric forest policies and interventions, we argue that the successive state forest-related interventions over 30 years allow local villagers in A Luoi to incorporate their local histories, socio-economic contexts and biophysical attributes of forests, as well as their 'fantasies of identity' into their thoughts

related to forests. The process stimulates villagers' ability to act even beyond the state regulations in the forests. They have been empowered and mobilized to act independently but still within the umbrella of state-led governance, and they have formed their own new forest-based livelihood patterns, contributing to the significant changes in the forest landscape that they live in.

Consequently, a new environmental subject, as I called 'new forest people' has been created. Far from the traditional prejudices of the government and lowlanders, whereby uplanders were considered as backward and the exception from mainstream development of Vietnam, or as people failing in (or resisting) forest-related interventions, poverty alleviation or alternative livelihood programs, new forest people in A Luoi appear completely different. They readily match the image of upland farmers that is propagated in governance policies, publications, and media. Uplanders have escaped the negative images of them previously propagated in Kinh society and by the government, as 'forest thieves' (Hoang, 2007) and 'forest destroyers' (McElwee, 2004; Pham, Moelione, et al., 2018; To, 2015) to become 'forest growers' and 'forest protectors'.

However, it is still too early to assess whether these new 'environmental subjectivities' are 'good, bad, or ugly'. A number of new dynamics have emerged recently, including a land rush, the proliferation of commercial acacia plantations, as well as new challenges in natural forest governance with market-based incentives such as Payment for Forest Ecosystem Services (PES) or commercial non-timber forest products (NTFP) collection. The images of forest destroyers and forest growers, or forest thieves and forest protectors, are two sides of the same coin. Depending on the forms of fantasies of identity, the levels of commitment, or the individual abilities, the villagers choose and decide which environmental subject positions they become. And not all villagers are at the same place along this transition process. Some have been able to transition completely, having not only one but multiple 'subjectivities', whereas others could not transition, or were stuck somewhere in between. This is a different kind of transition that is happening concurrently with the superficial changes of forest landscapes. The formation of new forest people, together with their new behaviors and actions, definitely is an intimate part of recent forest dynamics (plantations vs. protections) and will contribute to further changing forest landscapes in the future. This paper therefore also contributes to drawing a more complete picture of the making of a forest transition in practice.

6.2.3 Material and background

6.2.3.1 The study sites

The study was conducted in mountainous Huong Nguyen and A Roang communes, in A Luoi district, Thua Thien Hue province in Northern Central Vietnam (see Figure 17). The location is about 70km from Hue city, the old capital of Vietnam. These communities were chosen for the study because: (i) they are located close to rich natural forests in a mountainous region of the province, where most of the territory is classified as forestland; (ii) their residents have a long history of using forestland and forest resources, i.e. timber and non-timber products (NTFPs) for their living; (iii) the state's successive forest-related policies and interventions over the last decades have been implemented here and brought about significant changes in landscapes and local lives; and (iv) these communities show distinct dynamics with the rise of the smallholder acacia plantations and the active participation of villagers in forest protection and conservation programs.

Huong Nguyen and A Roang communes are surrounded by natural forests but are also two of the growth centers of smallholder tree (acacia and rubber) plantations of Thua Thien Hue province. The two communes are in the buffer zone of the newly established (as of 2013) nature reserve, named Sao La. The landscape can thus be defined as a forest conservation-production cluster. The two communes are home to ethnic minority groups, specifically Katu people in Huong Nguyen (accounting for nearly 94% of the population) and Taoi, Katu, and Paco people in A Roang (accounting for 98%). These two communes are also amongst the poorest communes in Thua Thien Hue's disadvantaged district of A Luoi; over 34% of the households in both communes are classified as poor and near poor (A Roang and Huong Nguyen CPC, 2019).

In terms of current livelihood or economic activities, both communes represent the forest-based mountainous communities of Vietnam. Most villagers are recorded as exclusively farm households, deriving all income from tree plantation or cropping activities, livestock-raising, and collecting forest products from natural forests. Besides very few migrant Kinh people, there are very few households in the villages working as state employees and running businesses (such as restaurants, motorcycle repair services, grocery shops, and so on). But even these households mostly still spend time on (and derive income from) on-farm activities, livestock raising, or forests.

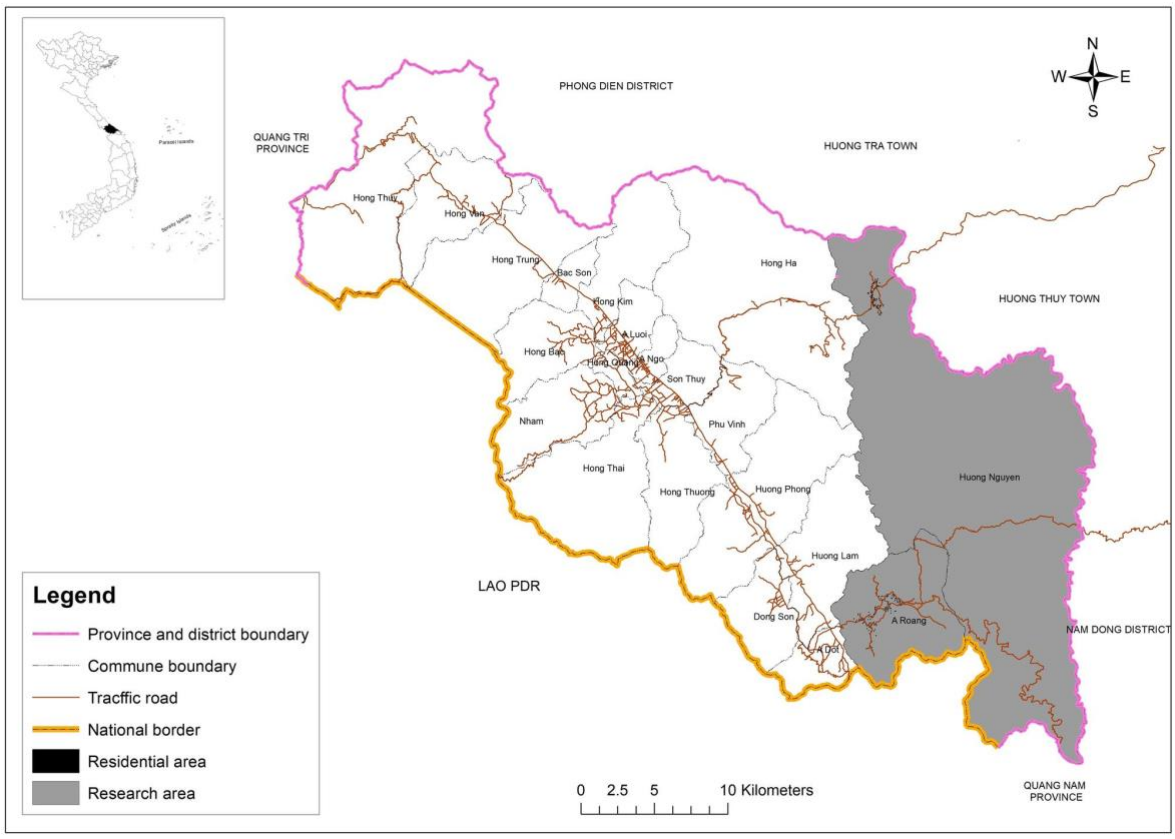

Figure 17 - Research area

A Roang and Huong Nguyen are part of the ecoregions 'Northern Vietnam Coastal Moist Forests' and the 'Annamite Range Moist Forests' (Meyfroidt & Lambin, 2008; Wikramanayake et al., 1997). During the Vietnam-US war until 1975, significant portions of the communes' forests were destroyed by chemical defoliants and bombs. In A Roang, it is still easy to spot bomb craters in the landscape. Following the return migration to A Roang in 1973[35] and resettlement of Huong Nguyen in 1996, along with the growth of the commune and other forest-related efforts, forest utilization had increasing effects (both negative and positive) on the coverage and quality of the already-damaged forests (detail in sections below). The commune areas have two kinds of forests: natural and plantation forests. The forestlands are also classified by function into three types: special-use forests, production forests, and protection forests[36] (see Table 19). All types of forests were allocated to different forest owners, including three big state forest owners (Sao La Nature

[35] These resettlements in both communes fit a long pattern of the national government efforts over the past 50 years and Thua Thien Hue provincial governments since 1975 to engage ethnic minorities into a war and also push a post-war permanent settlement and to transfer forest utilization practices (see details in Chapter #3).

[36] The Vietnamese Forestry Law 2017 clarifies three types of forest and corresponding legal regulations for governing them: (i) special-use forest is indented for nature conservation, protection of the ecosystem and flora and fauna gene resources, and historical, environmental and culture sites; (ii) production forest is the source of wood and forest-based products that are meant to contribute to ecological protection; and (iii) protection forest is set aside for the protection of the environment in general, and watersheds and soils in particular.

Reserve, A Luoi Protection Forest Management Board and Nam Hoa State Forest Enterprises) and households (individuals, groups of households, and communities).

Some main socio-economic and forest characteristics of the of Huong Nguyen and A Roang are presented in Table 18 and 19. In terms of land use, forest cover in A Roang and Huong Nguyen is very high, 76.15% and 84.08% respectively, while the remaining land use is paddy, home garden, residential area, land for transport, and rivers and streams.

Table 18 - Some main characteristics of Huong Nguyen and A Roang
(Source: Huong Nguyen and A Roang CPC, FGD and Interviews 2019)

Factors	Huong Nguyen	A Roang
Total Households	348	654
Total population (no. of people)	1362	2768
Household size (no. of people)	3-4	4-5
Number of villages	4	7
Total natural area (ha)	32	5787.96
Total paddy land (ha) (for wet rice, dry rice, corn, cassava, etc.)	156.5	587.8
Paddy land per HHs	0.49	0.9
Total forest plantation area (ha)	258	134.9
Forest plantation land per HHs (average)	0.74	0.2
Total rubber plantation (ha)	428.7	510.5
Rubber plantation land per HHs	1.23	0.78
Main sources of household income	Tree plantation (acacia and rubber), acacia-related labor wage and forest protection contract	Rice/crop cultivation, Weaving, NTFP collection, tree plantation (acacia and rubber), and forest protection contract.
Total household annual income (million VND)	15	12-14

Table 19 - Forest area data in Huong Nguyen and A Roang

(Source: A Luoi FPD, 2019)

Forest indicators	Huong Nguyen	A Roang
Total land area (in hectares?)	32397.60	5788
Total forest area	27238.31	4407.55
In which:		
Natural forest	25739.75	3227.97
Plantation Forest	1498.56	1179.58
New Plantation Area	440.84	202.47
Forest cover	84.08%	76.15%

6.2.3.2 Research method

Both primary and secondary data were collected in the study area from January to June 2019. Documents and reports from state offices provided secondary data, while primary data were obtained through focus group discussions, direct and participatory observation, semi-structured interviews, and a household survey. Focus group discussions were implemented in eight villages (four in each commune) with village leaders (of which there were two), elderly residents, and other groups (five men and five women) to obtain general information about the history, socio-economic conditions and activities, village landscape, and land-use changes as well as livelihoods/farming patterns over time. Direct and participatory observations were made to gain an overall impression of geographical conditions, land use, and forest practices in daily life in the villages.

Semi-structured in-depth interviews were undertaken with 20 households of all economic classes (rich, medium, and poor) identified through a snowball method or discovered through the household survey. Each interview took three hours in the setting of households' houses or their farms in the forests. All interviews had the participation of at least husband and wife (and other family members) to increase the accuracy of information.

For the household survey (see Table 20), a questionnaire was developed, which contained questions on (i) general household information (demography, ethnicity, educational attainment, gender divisions of labor); (ii) land (agricultural and forest) use of households; (iii) household economic conditions and activities including assets (furniture, livestock, devices), livelihoods (farming practices, use of forest products, and other income sources); (iv) perceptions of forest changes surrounding their villages, tree plantations, forest-protection activities and NTFP

collection activities; and (v) the fantasies of forests and livelihoods in the future. Since Huong Nguyen and A Roang have different populations, we subjectively decided to select four villages in each commune and around 20-25 households/villages. According to the latest government statistics, all households were randomly selected (to allow for some non-responses) and covered all three household economic levels.

All interviews with respondents were conducted face-to-face by the researcher, mostly in their houses. I followed institutional requirements for ethical conduct and obtained approval from my institute, the Institute of Geography and Sustainability (University of Lausanne) and referred to relevant requirements from Hue University of Agriculture and Forestry (Vietnam), the partner of the project that we worked for. Following the requirements and common norms of ethical research practice, all respondents provided oral informed consent and participated voluntarily. For the government officers or experts, we used the letter of recommendation from IGD and contacted them by email or phone to schedule an appointment. For these people, the introduction of personal information, the topic and purpose of the study, and the proposed main questions are essential, deciding whether or not they agree to participate.

One more note: both Huong Nguyen and A Roang are located in the Vietnam-Laos border area, and as a result, researchers and visitors must be accompanied by local authorities to obtain official consent. Through this official line, for the first few days in the village, normally the representatives of the local authorities took me to go around the village to let people know about our presence. For local villagers, I did this orally, as seeking written consent from villagers who were often illiterate, or mostly ethnic minority people, may have been too invasive. In Katu and Taoi culture, personal introductions are particularly important and would often take 10 to 20 minutes. For many participants, personal details about myself, my family situations, and my relationships with local authorities seemed to be more important than information about my research.

In addition, confidentiality and anonymity of interviewees with sensitive information were also considered in the study. The field notes are all made by handwriting, I did not use the phone to record nor to take pictures to ensure safety and limit the possibility of information leakage affecting the informants. In this paper, I also use pseudonymous names in stories to ensure the confidentiality of informants.

Table 20 - Overview of household interviews in study villages:

Huong Nguyen (1a) and A Roang (1b)

(Source: by author)

(1a) Huong Nguyen

Village	Number of households	Poor and near poor households	% Katu (remainder of people mainly indigenous)	Number of interviews (n) and focus groups (FGD)
Mu Nu – Ta Ra	108	56 (51.8%)	100%	n = 23 and 2 FGDs
Chi Du – Nghia	72	26 (36.11%)	98.6%	n = 24 and 2 FGDs
Giong	84	20 (23.8%)	97.6%	n = 21 and 2 FGDs
A Ry	84	18 (25%)	76.1%	n = 23 and 2 FGDs
Total households of Huong Nguyen	348	120 (34.48%)	93.39%	N = 91 (26.1% of households)

(1b) A Roang

Village	Number of households	Poor and near poor households	% Taoi (remainder of people mainly indigenous)	Number of interviews (n) and focus groups (FGD)
A Min – C9	102	56 (54.9%)	100%	n = 26 and 1 FGDs
A Roang 2	74	30 (40.54%)	100%	n = 24 and 1 FGDs
KaRon - Aho	100	57 (57%)	100%	n = 25 and 1 FGDs
A Chi – Huong Son	103	50 (48.54%)	49% while 41% Ka Tu people in Huong Son part	n = 28 and 1 FGDs
Total households of A Roang	379	193 (50.92%)	93.39%	N = 103 (27.1% of total households)

6.2.4 Background

6.2.4.1 Katuic ethnic group and traditional forest practices in A Luoi

Research for this paper focuses on people of Katuic ethnic minority groups, including sub-groups of Katu, Taoi, Pako-Pahy and Bru-Van Kieu – who are officially classified as one of the 54 minority groups in Vietnam (Dang et al. 2016). According to the most recent survey in 2019, about 74,000 Katu people live in highland river basins along the Laotian border, especially in Quang Nam and Thua Thien Hue province. Similarly, about 52,000 Taoi people live concentrated in A Luoi district of Thua Thien Hue Vietnam and Huong Hoa district in Quang Tri province. Both groups originate in the Truong Son mountainous region along the Vietnam-Laos border.

Like other Uplanders across Vietnam, the traditional livelihoods of these groups depended on natural forest products and forestland. Locals conducted shifting cultivation: forest patches were slashed and burned to cultivate crops (mostly upland rice, cassava and maize) for a few years (three to five years), before letting the forest regenerate for decades later (Mertz et al., 2009). Besides the main staple crops, they also planted beans, sweet potatoes, bananas and other vegetables and fruits. Additionally, they also hunted and gathered non-timber products such as rattan, honey, and conical hat palm-leaf (Arhem 2009; Bayrak et al., 2013).

Both Taoi and Katu villages had traditional methods of managing the forest. Usually they perceived timber, non-timber forest products (NTFPs) and forestland as common property, following their respective community institutions governing the use of these resources. Villagers generally had relatively equal access to forest resources.

The villagers were governed by an elected village patriarch. The village patriarch played an important role: without him, the traditional village society would not exist (Arhem 2009, 2015). The patriarch was responsible for distributing cultivation land in the forest. In Taoi villages the patriarch distributed land directly to villagers, whereas in Katu villages, these rights were passed to different clans and families who in turn re-distributed it to member households. Although forest products and forestland were managed collectively, swidden plots after distribution were privately owned and operated. These swidden plots could then be passed from one generation to the next.

In addition to being important livelihoods, forests also play a crucial role in both Katu and Taoi people's cultural lives. Local people still follow numerous rituals and beliefs that form part of their customary rules on forest use and management. Many Katu and Taoi festivals, folktales, songs, and poetry are related to forests. Traditional Katu and Taoi knowledge and forest management systems include not only utilitarian and ecological concerns, but also their

worldviews, religious beliefs, and historical, institutional, social, and cultural factors including a strong sense of their identity as 'forest-based people'.

The Katuic people differentiated protected forest areas from those used for production. Protected forest, the dwelling place of scarred forest spirits, usually included primary forest and watershed areas that all villagers had to manage and protect. Meanwhile, production forest areas were used as sources of income and nourishment through shifting cultivation, hunting, and gathering NTFPs. Katu people also planted bamboo trees (lồ ô) to cover expenses for village celebrations such as the Buffalo Sacrifice Festival.

6.2.4.2 Refashioning uplanders-forest relations in Northern Central Vietnam

Historically, the Vietnamese Uplands were perceived by the non-upland population as unoccupied and unpopulated areas. Uplanders, including Katu and Taoi people, were considered to be backward, uncivilized, underdeveloped and extremely poor (Rambo et al., 1995). After the country gained its independence in 1954, the Vietnamese government made a strong effort to "*enable uplands to catch up with the lowlands…ethnic minority groups to catch up with the Kinh*".[37] To bridge the 'economic and cultural gap' between these divided groups (lowlands and uplands, ethnic minority and majority groups, etc.), the government aimed to shape the Uplanders as environmental subjects, who are rational and regulate their actions and conserve the ecosystem by reducing their dependence on the forest and the provision of external economic incentives and alternative livelihood initiatives (McElwee 2016). Policies initiated along these lines included the incitation of permanent or settled agriculture, sedentarization programs, and forest devolution policies.

a. Sedentarization program

The party and the state have prioritized settlement policies for a long time. Settlement is a recurrent central element of the directives and resolutions of the party and the government on the socio-economic development of the mountainous areas, with the view to implementing the policies and guidelines of the general ethnic minority policy. In 1968, for instance, the government had emphasized that "*rapid and strong implementation of fixed agriculture and sedentarization in combinations with collectivization for swiddeners is an urgent task*".[38] The push for sedentarization and fixed agriculture was seen to incorporate three main revolutions: means of production, technology and ideology or culture.[39] These revolutions, combined with

[37] The Third Party Meeting Instruction 1966:5, cited by To (2008).
[38] Resolution of Ministerial Council on 12 March 1968, cited by To (2008).
[39] As To (2008) mentioned, regarding the first revolution, the program aimed to fix swiddeners to a piece of land by having them work the land so that they could no longer move to other areas. The program also aimed to bring in new cultivation techniques to

collectivization, were expected to permanently settle large number of swiddeners, with Katu in Huong Nguyen and Taoi in A Roang as no exception. Over the past 40 years, the settlement program has had distinctive characteristics that can be summarized into two periods: 1963-1990 (which shaped settlement of A Roang in 1973) and from 1990-present (which shaped the resettlement of Huong Nguyen in 1996). See more in Chapter #3.

b. Forest devolution and forest land allocation (FLA) program

In addition to settlement and resettlement the state undertook a number of policy initiatives in the 1990s that have contributed to today's new forest people identities. These include forest devolution processes and a number of afforestation, reforestation, and forest protection programs. A summary is presented here, in Chapter 3, and in Cochard et al., (2020) (see Appendix 2) and refer to McElwee (2016) for history.

Prior to the country's independence in 1954, forests were managed by the French colonial state. However, owing to the absence of colonial rulers in the uplands, virtually all forests in upland areas were managed by local villagers. After gaining independence in 1954, the newly established Vietnamese government declared that all forests in the north were state property and expanded to the South with Vietnam's nationalization after 1975, at the end of war. To manage forest areas, the government established a system of state forest enterprises (SFEs) that were overseen by the Ministry of Forestry (MoF), or Ministry of Agriculture and Rural Development (MARD), or the provincial or district People's Committee. In theory, SFEs had the duty to simultaneously protect the forest and to exploit timber to meet the log quota determined by the state, despite its obvious contraction. In practice, the SFEs merely focused on timber exploitation, disregarding their duty to protect the forest.

At the end of the 1980s, Vietnam's forests underwent a crisis. Over-exploitation of forest resources, shifting or swidden cultivation activities of communities living in or close to forests as well as the conflicts between SFEs and villagers (as many villagers demanded the land that was originally monopolized by SFEs) have recently been found to be the main causes of forest loss and degradation ((De Konick, 1999). To deal with the crisis, the Vietnamese government, with support from the International Union for Conservation of Nature (IUCN) and the United Nations Development Program (UNDP), shifted its emphasis on the forest from timber extraction to forest protection and development: "*the most important key issue in Vietnam is protection*" (MoF 1991:91), but "*without effective support from external sources, Vietnam will not be able to*

help swiddeners increase crop productivity (the second renovation). In addition, the program also considered that to have swiddeners settled at a fixed place would take time, as swiddeners need to change their ideology.

*maintain a sufficient base for the threatened species or their natural habita*t" (ibid.). To deal with the crisis, the government called for the allocation of land to non-state actors and suggested that the forestry sector be reconstructed in order to cope with the emerging market economy in Vietnam. Forest devolution process is what we called the reform.

Under the forest devolution policies, the government transferred management of large areas of forestland previously controlled by SFEs or local authorities, to local households. The government believes that implementing the policies would improve local livelihoods for the upland poor and stabilize forest conditions to increase forest cover (see more in Chapter #3).

In A Luoi, forest land allocation (FLA) to individual households as the main activities under forest devolution was carried out in according with the Forest Protection and Development Law. Promulgated in 1991, this allowed for the allocation of land to households with the right of lease, transfer, inheritance, mortgage, and transfer. Decree No.64/CP, promulgated in 1993, gives people the right to use land for 20 years in the case of land for annual crops, and 50 years in the case of land for perennial crops and forest land. The Decree 02/CP allowed for the allocation of land to organizations, households and individuals for stable and long-term use for forestry purposes within 50 years. At the same time, households are allowed to exercise their residual rights, transfers, mortgages, and exchange of use rights to other people according to the 1993 Land Law. Land allocation for individual households aims help individual households better access land. When households receive land and long-term land-use rights, households will have incentives, opportunities to improve livelihoods and to stabilize their lives, and abandon traditional farming practices. In this way of thinking, the government believes that household livelihoods are improved, villagers will have opportunities to invest in forest development and protection and thereby increase forest cover.

The FLA encompasses a wide range of activities, such as surveying, classifying, boundary demarcating, mapping, land-use mapping, issuing policies on land use and land management, implementing policies, allocating land, contracting, and withdrawing land, registering land, creating land inventories, issuing land use certificates and resolving land conflicts. This indicates the government's attempt to control the local people into the space, by drawing boundaries in the forest and specifying activities that are allowed or not allowed within these boundaries. In addition, the devolution process also aims to 'settle' people and attract them to certain portions of land with rigid boundaries on the fields as well as on the map, by registering them in the land recording books. This is the reason why the forest land allocation policies have been designed in parallel with the sedentarization in the second phase. As soon as the Decree entered into force, Thua Thien Hue province and A Luoi district, in A Roang, implemented programs. In Huong

Nguyen, the program started later, and taking place together with their resettlement program in 1996-1997.

Although the policy clearly regulates implementation steps and specific content in each step, in practice, the implementation of policies in localities was quite slow, due to inadequate human and financial resources as well as the resistance of villagers to the new kind of land-use setting. For example, in Huong Nguyen, at the time of arrival, only 34 households had received land allocated by the state, because they thought the state policy only allowed land use for forestry tree plantation purposes, not for their swidden cultivation. At that time, acacias were considered as 'valueless' trees (see more in Chapter #5). Similarly, in A Roang, although the state agencies sought to implement the policy, villagers did not want to receive land to plant forestry trees. To achieve the plantation quotas, the state had to use the solution of hiring villagers, or exchange rice or food stuff to plant trees on the land, considered as 'borrowing' from the village to fulfil its afforestation goals.

At the same time, the implementation of FLA raised a number of problems when the barren land was also considered to be a suitable place for local people to practice their swidden cultivation. In some places, forest degradation and deforestation has worsened, as a result of people being forced to look for new farming areas, and with the removal of community management of forest resources. Faced with new difficulties in meeting their minimum livelihood needs, local people have little choice but to exploit the forest even more (Bayrak et al., 2013; Castella et al., 2006; Sikor, 2001b; To & Tran, 2014). The situation is not observed clearly in Huong Nguyen and A Roang because an abundance of barren land was available after the war. However, the FLA policies set an initial foundation that formed the transition from swidden cultivation to smallholder tree plantation, which I will describe in the sections below.

I describe some forest development programs that I consider as part of settlement programs and forest devolution progress, as they reflect the government's will to transit the relationship between uplanders: forests in practice. It is divided into two parts: Forest development/tree plantation policies and forest protection policies.

c. Forest development policies

Going along with the resettlement program and forest devolution process in A Luoi, there are several reforestation policies that have been implemented in A Luoi, including: Program 327, Five Million Hectare Program (661), and NGO-led initiatives through post-war restoration campaigns (see more in Chapter #3 and #5).

Program 327

In September 1992, the Vietnamese government launched 'Program 327', beginning its implementation two years later. It is the first national reforestation program with significant investment, US$68 million per year for five years (McElwee & Tran, 2021). The main objective of the program specified important strategies and policies to bring barren land into effective use. Under this program, 45% of funding was spent on afforestation and the rest on forest rehabilitation to re-green barren land, while the remaining was used for protecting the environment, and to encourage the practice of fixed agriculture and sedentarization among swiddeners and uplanders across Vietnamese uplands. Therefore, the first reforestation program implemented in A Roang is Program 327. The A Luoi SFE (now A Luoi protection forest management board), the Defense Economic Delegation No.92., together with A Luoi Forest Protection Department (FPD) and A Luoi District People's Committee, were assigned as management units with the local households as production units. Under the program, the management units allocated barren land to households for planting trees. Australian acacias were selected for planting. In return, the households received a planting payment. The program also sought to increase the forest protection areas, including special-use and protection forests through the reforestation activities carried out directly by the state entities. These efforts started to expand forest cover but garnered considerable criticism for having prioritized wood production over food security, particularly in poor upland areas, and for relying heavily on exotic trees such as acacias (De Jong et al., 2006).

Program 661

Program 327 laid the groundwork for a National Five Million Hectare Reforestation Program (5MHRP) that ran from 1998-2010, which dramatically increased both investment levels and ambitions in forest development. The 5MHRP launched officially in July 1997, under the name 'Program 661'. The government expected that by the end of program: (i) the country's forest cover would be 43%, up from 30% in 1999, (ii) forest plantation would become a driver of economic growth and poverty reduction in rural areas, and (iii) the overall supply of wood would increase (V. S. Nguyen & Gilmour, 1999). Unlike Program 327 where local villagers were passive participants, Program 661 considered villagers to be the main actors in forest planting and protection, and as the main beneficiaries of these activities. Swiddeners and/or poor households living around the forest are prioritized to receive forestland areas for planting trees or natural forests for protection. Combining with Forest Land Allocation (FLA) policies, Program 661 provided formalized land tenure certificates (known as 'red books'), requiring that recipient households plant tree seedlings chosen and provided by the state. In Huong Nguyen, Program 661 can be considered as the first state intervention that supported the establishment of commercial acacia plantations as we see today (see more in Chapter #5). The government also provided

technical support to increase planted timber productivities and trading facilities (such as road systems) to support the plantation industry taking off.

Local post-war forest restoration initiatives

Besides the two big national forest development programs, located in the biodiversity corridor of the Greater Mekong Subregion and one of the areas heavily affected by war, A Luoi has also been the recipient of large programs funded by international donors and NGOs, to restore and develop forests. These programs offer a variety of support, including the provision of seedlings, promotion of forestland allocation, technical support, finance and loans for livelihood development, even physical facilities such as roads, schools, etc. For example, the project to plant watershed protection forests in Quang Tri, Thua Thien Hue, Quang Nam, Quang Ngai and Phu Yen provinces was funded by loans from the Japanese Bank for International Cooperation (JBIC) in 2008. Similarly, the Greater Mekong Subregion Biodiversity Conservation Corridors (BCC) was funded by the Asian Development Bank (ADB), and a number of post-war landscape restoration programs or rural development and forestry programs were funded by local NGOs/research institutes.

d. Forest Protection Programs

The relationships between uplanders and forests in A Luoi have also been shaped by a number of forest protection programs. In other words, they also reflect the changes in the state forest governance modes and their emphasis on, and interests in, forests over time.

Forest devolution policies and forest land allocation in the 1990s are very selective. The government selectively chooses to implement them mostly on barren land or degraded forests, not in the more important (i.e., economically valuable) natural forests. In A Luoi, most natural forests that have been under the management of state entities that have been declared protected and special-use forests. In these types of forests, human activities, such as swidden cultivation, timber logging or even non-timber forest products (NTFP) collection, are extremely restricted. These activities are defined as 'illegal' under the state rule. Management control over these types of forests rests entirely with state agencies, whose intervention is carried out through the *fortress model* and makes use of *sovereign environmentality* (Fletcher, 2010). It governs through top-down 'command and control' approaches, such as the deployment of surveillance mechanisms to ensure that individuals do not break the law. The law imposes severe punishment on those who do not adhere to regulation, creating an environment where individuals are afraid to violate the moral code in fear of its consequences. These types of forests may be contracted to the local people for

protection purposes but not for utilization. Under this contractual arrangement, the rights of the local people for access to and control over the forest are very limited.

During the 2000s until now, in A Luoi, more inclusive models of resource management (which were supposed to link conservation to poverty reduction and development) have begun to arise. The interventions are under different names, but mostly under the umbrella of 'integrated conservations and development' (ICDPs). In A Luoi, the activities were mainly funded by foreign donors, under buffer zone support programs for alternative livelihoods and poverty reduction, low-impact and sustainable NTFP collections or some local co-management of protected areas initiatives. However, the interventions in A Luoi have not yet been documented, but as with other localities in Vietnam, they eventually had mixed results.

Forest devolution policies, however, still create some spaces for local villagers' participation in natural forest protection. Local people can be allocated some small portions of natural forests. In A Luoi, the process only started in 2010 (see more in Chapter #3). A community-based forest management mode has thus been formed with the participation of entire villages or with groups of households. The devolution gave the local people specific rights to forests. Besides the responsibility to protect allocated forests, local villagers can receive payment from the government's subsidies and other relevant financial mechanisms, such as Payment for Forest Ecosystem Services (PES). They are also allowed to harvest firewood, NTFPs and undertake selective cutting of trees or other plants which they themselves had planted.

For the last 40 years after reunification, the Vietnamese government has paid great attention to the restoration and development in the landscape leading to major changes in social, political, economic, and ecological aspects. We present these in the next sections.

6.2.4 The new forest lives in A Luoi

Over the past 20 years, the forestland area in A Luoi district, as well as in the two research communes, has increased steadily over the years. This has contributed to the increase in forest cover of A Luoi district, is the highest level in Thua Thien Hue province, and is one of the localities with the highest forest cover in Vietnam. However, the increase in the forest land area of A Luoi is mainly due to the expansion in tree plantations, mostly acacia and rubber. Natural forests, which are currently protected by the state and other community groups, are slowly falling behind this landscape. In this section, I pose and try to answer the question: how do uplanders, like Katu and Taoi people, whose culture was previously based on shifting cultivation and hunting, deal with these changes?

6.2.4.1 Changing perceptions about forests

As a first step to investigating the villagers' subjectivities as 'new forest people', I look at villagers' perceptions of forests. That is, how they view the forests, what forests should look like, and how this has changed over the last few decades.

All surveyed households acknowledged that the natural forest (or 'rừng già' – primary forests) should have big and valuable trees (by valuable, this did not mean for biodiversity but in the sense that the wood can sell at a good price) and wildlife, especially mammals. However, not all were able to articulate what forests should look like and which species should be present. They confirmed that such natural forests, containing big trees and wildlife, have declined in both area and quality recently.

Huong Nguyen and A Roang's villagers' perspectives about 'natural forest' surrounding their villages differed due to their geographic context. In Huong Nguyen, most villagers stated that there are no natural forests nearby: "natural forests are found near the old village, on the upstream of Huong River. There is no primary forest here". In contrast, A Roang people, living closer to the rich natural forests acknowledged their presence but noted their degradation:

> "*Yes. The primary forest has decreased but we still have inside the management of state forest owners. In the past, wild animals such as bears, tigers, or deer still came to eat plants in the production area; now no more. If you want to see the primary forest, it takes 15-20 minutes by motorbike*" [HH interview #100, April 2019].
>
> "*The natural forest is now poor. There are also some precious hardwood trees, but the number is small and mainly small trees. In general, the forests where the wood used to be very precious, and the wild animals are also many… have been completely exploited*." [HH interview #79, March 2019].

The above information reveals people's perception of the degraded area and quality of natural forests. The decline of natural forests also causes non-timber forest products in the forest to decrease, affecting the livelihoods of poor households. According to my survey, up to 49.5% of the poor often go to the forest to collect forest products when there is a lack of food. The poor often rely more on forests, but now this activity faces many difficulties because these forest products are increasingly scarce, forcing them to go further or stay longer in forests and face many risks. The stricter regulations for forest protection and the establishment of new protected areas like Sao La NR in 2013, or community-based forest management or the implementation of PES, are also mentioned as the challenges faced by the poor in accessing the forests. As one villager shared:

"*Since Sao La was established in 2013, we are almost forbidden to exploit rattan in their forest. Many households, despite the ban, still go to collect rattan but we are arrested, fined or [they confiscate] our motorbikes. When we have money to pay the fine (normally VND500,000/time), we can take our motorbikes back*" [HH interviews #150, April 2019].

These difficulties in forest access have also influenced people's perceptions of rattan collection: "I *don't understand, we have a lot of rattan in forests, why they don't let people benefit. It is not a big timber tree, and I am not illegal logger. From our daily livelihood activities, now it becomes illegal*," shared villagers [IHH interview #102, #160, #170, April-May 2019]. This also causes people to make changes and have new plans and strategies for accessing this NTFP source. We will present this in detail in the following sections.

Interestingly, in the interviews, when asked only whether 'the forest' has increased, most people (around 86%) answered yes. But when asked specifically about 'natural forest', the answer was no. So for most people, acacia plantations, or acacia forests (rừng keo), were included in the concept 'forest'. Likewise, nearly 92% of surveyed households said that they participate in forest plantation, considering acacia plantations (rừng tràm keo) as afforestation activities. "If the natural forest is reduced, we replace it with the new forest, like acacia forests," a villager shared [HH interview #15, Feb 2019].

There was a clear perception that the good quality natural forests are owned by state forestry institutions. Villagers explicitly stated: "*the rich forests belong to Sao La, to A Luoi and Nam Hoa*" [HH interview #17, Feb 2019]. One interviewee said:

"*The state manages rich forests. Twenty years ago, or even 10 years ago, they still allowed us to open the new farm for plantations or NTFPs collections. But they've banned all now. They said they have to protect the forest for water services provision*." [HH interview #150, May 2019].

Recently, under the FLA policies, five villages in A Roang and twenty-three groups of households, and one village in Huong Nguyen, were allocated natural forests for protection. It marks the first time that villagers in A Roang and Huong Nguyen have participated in natural forest management. By contrast, there was also a clear perception that community forests were often of poor quality or that natural forests within them were of little value to protect:

"*…community forests or groups of households forests are very poor, no wildlife, no big trees. You cannot call it as forests. I don't understand why we have to keep those forests*" [FGD #4, Huong Nguyen 2019].

"*…there are only some trees left on the top of the hill, less than 1ha surrounded by acacia plantation. I don't understand why we have to protect it*" [HH interview #140, April 2019].

"*What is the benefit of keeping that forest? They just recently paid a small amount of money for protection. While acacia is also a forestry tree, and it has a high income for us. Why not alter?"* [HH interview #48, Feb 2019].

People's perceptions are also quite clear about the causes of natural forest degradation. From the survey, 79% of households attributed the decline of natural forests to both illegal logging and acacia plantations. Villagers have also started to imagine that there is a real battle going on between natural forests and acacia plantations.

6.2.4.2 New forest-based livelihood patterns

My focus in this section is to describe new livelihood patterns of people in A Luoi over the last four decades. Findings reveal that under the implementation of state interventions to remake forest landscapes and promote development, local people have, in the process, partly or wholly transformed their traditional forest-based livelihood systems into new ones.

In the past, local people traditionally practiced slash-and-burn farming on hilly land, animal husbandry, and exploited forest products from natural forests. Villagers in both A Roang and Huong learned wet-rice paddy cultivation from Kinh people and Northern Vietnam soldiers when they stayed in their villages during the war. Livelihood practices continued to evolve with the arrival of rubber, acacia, and other commodity crops (cassava, maize, coffee, and so on).

Table 21 summaries the contemporary pattern of livelihoods relating to forests in both Huong Nguyen and A Roang. It is based on focus group discussions in eight villages to get a first sense of the current forest-based livelihoods, which appears more diverse compared with the traditional pattern. However, in the analysis, we would like to highlight two main changes in local livelihoods that relate directly to the state interventions mentioned in the previous sections: shifting from swidden cultivation to commercial tree plantations, and changes in forest product collection.

Table 21 - Current livelihood sources in each category of Huong Nguyen and A Roang

(Source: Household survey and FGDs, by author 2019).

Sub-group	Category	Description
Forest derived	Tree plantations	Mostly acacia and rubber cultivated in old swidden fields, mixed with upland rice, maize, cassava, pumpkin, melon and so on
	Timber from natural forests (illegal)	Cash income from selling logs, or payment for the cutting of logs for hirers (as hired labor for building house) – excluding logs used for building own houses or household demand for furniture
	NTFPs	Forest products, mostly rattan and honey, and 'but also: mushroom, bamboo shoots, medicinal plants, wild vegetables, and wild animals.
Forest-related work	PES subsidy	Payments for protection work under PES schemes for households and community owners
	Forest protection salary	Monthly salary under the contracts with state forest owners
	Labor wage	Acacia and rubber related work (for planting, weeding and harvesting) – excluding income obtained from harvesting for others. or other work contracts with the development projects (ass seasonal hired labor income of weeding, harvesting, log sawing and so on).
Non-forest derived	Paddy	Rice cultivated in paddy fields
	Livestock	Income from selling cows, buffaloes, pigs, chickens, ducks and so on (not calculating livestock which were not yet sold)
	Salary	Monthly income of government employees (in-position governmental officers or wageworkers) and pensions (army supports for retired people)
	Business	Income from running of restaurant/shop, furniture producing or petty sawmill,

	motor repair services or selling handcrafts (with Taoi people in A Roang).
Government subsidy	Government subsidy (for poor or for ethnic minority people)

a. Transition away from swidden cultivation to commercial tree plantations

The transformation of swidden to commercial tree plantations in A Luoi has been the result of deliberate state-led interventions on land-use, forestry, and development over the last four decades. All these policies have a common goal to eradicate swidden and 'settled' people, but with myriad approaches, such as: resettlement, land-use zoning and agricultural extension services, and forest tree plantation programs combined with discourses of modernity and development to motivate villagers' voluntary changes. Findings in A Roang and Huong Nguyen clearly demonstrate this transition.

The first change concerned the villagers' perceptions of swidden cultivation. Villagers no longer referred to the land inside the boundaries as rẫy (swidden land), but as *trại* (farming land) or *rừng trồng* (plantation forests). When asked whether they agree with the statement "*Your swidden land have increased or decreased over the last 30 years*", nearly 70% of Huong Nguyen and 64% of surveyed households in A Roang said that they no longer have *rẫy*. However, in contrast, when we asked for details, more than 80% in Huong Nguyen and 60% in A Roang answered that their tree plantations (acacia and rubber) were planted on old swidden land, inherited, or indicated that it was "*established before the state ban*". This reveals how state policies change people's cultivation practices and how they label their swidden cultivation. Swidden cultivation is illegal: "*The state forbids swidden farming. I don't do farming anymore*" [HH interview #140, May 2019]. However, planting trees on swidden land is legal: "*The government and also NGOs supports us planting trees, so I think it is acceptable*" [HH interview #180, May 2019].

The second change concerned the cultivation practices. For example, Mr. Nghia, a former village head in Huong Nguyen, has a *trại* in A Pó – one of the two biggest local production areas, covering nearly three hectares. He acquired this during the 2010s under the rubber plantation program. As he described, to open new fields, his family hired a team of 10-12 people who worked for two days to cut and burn the vegetation. The resulting ash after burning stayed as fertilizer for the fields. During the first years, especially during the first six months, when acacia/rubber had not yet closed their canopies, his family grew food crops such as rain-fed rice and cassava. I observed the same thing in this large production area of villages: villagers fenced their farms and practiced various crop farming activities together with the main tree plantations, or sometimes livestock

and poultry production within their boundaries. So, although the legacy of swidden practices somehow still remains, it is becoming more diverse in making effective use of the land.

The third change concerned the perceptions of villagers about the land values and boundaries. Commonly, swidden cultivation is perceived as shifting fields with fluid boundaries. However, this notion does not hold in A Luoi any longer. In the villages, swidden land has been individualized. There are many swidden plots with fencing. Villagers told me that they needed to construct a fence around the plots to protect their land. Usually, fences are made from tree stems neatly tied to each other. But now fences are made in different ways. The fluid boundaries of swidden fields made from standing trees, streams or stones were replaced with rigid boundaries made from concrete and wooden fences. Some households build a trench around their fields. With fencing, villagers are able to stabilize their claims on the land and fix cultivation on it: "*This is our second house. We stay here during planting and harvesting seasons*" [HH interview #130, April 2019].

The three changes above demonstrate a shift from local fluid swidden cultivation to the establishment of a farming system with concrete boundaries and intensive land use. At this stage, I can say that somehow the state has successfully transformed upland's cultivation practice into the similar lowland farming systems. Then why have commercial acacia plantations been well-received and thrived by villagers? I delineate three main reasons in the next section.

The first is land scarcity. As mentioned earlier, access to land in the village has been constrained in recent years. Turning swidden plots into *trại* (farms) is a good strategy to help households stabilize their land claims. Consequently, this prevents other people from using their land. In addition, the implementation of afforestation programs has caused people to switch from food crops to industrial and forestry crops on a large scale, from a variety of crops to a monoculture of some types of trees such as acacia and rubber, and to reduce the area of land under food crop cultivation. The quality of productive land has also deteriorated rapidly: "*Even if you want to grow rice, you cannot because the surrounding acacia trees cover all the sun. The water is getting less and less, the fields become dried fields*," said one villager [HH interview #30, Feb 2019].

Secondly, acacia and tree plantations have played an increasingly important role in providing a stable income for villagers. Motivated by the market incentive from acacia and having learned that Anh Lyn, the vice-chair of the village, was able to purchase a motorbike and a fridge, and sent his son to Japan using the income derived from wood, the households were encouraged to establish or expand their acacia plantations. Many used their cash income from rubber, labor wages, or forest product collections to invest in acacia planting. At present, each household holds

an average of 2-3 hectares of acacia plantations. After three to five years of planting, the villagers earn about VND 30-50 million (US$1200 - 2100) from one hectare of acacia plantation. Households with large plots of land in good locations can expand their acacia plantations more than those with smaller plots in unfavorable locations. This does not clarify, however, that the former households have larger acacia plantations.

In the village, food crop cultivation has gradually shifted to tree plantations. Then the tree plantation has shifted from the state-led reforestation objectives, an extensive mode of production to an intensive one. Villagers have adopted more hybrid seeds and applied more chemical fertilizers in their production. Constructing terraces within *trại* to cultivate tree plantations also helps households stabilize their livelihoods.

Tree plantations do not require specialized skills: no education, only good health. In addition, although hired labor does not require skills, it is a job that requires a lot of energy – even a healthy person cannot do it continuously for a long time. This is why 95% of surveyed households answered that what they worried about the most is losing their health. The income from this activity is considered very precarious, and temporary. Normally, women are paid only VND 150,000 – 200,000 person/day (USD$ 6-8 person/day) while men are paid more, at VND 180,000-250,000 person/day (US$ 7-10 person/day). However, according to people's assessments, although income from hired labor is erratic and not high, this is still considered an effective cash-making activity to help people cover daily living expenses.

Finally, as acacia plantations become increasingly important, swidden cultivation becomes evidently declined. Many villagers complained about the increasing labor investment for weeding, the declining soil fertility, or the shortened fallow period leading to decreased productivity of swidden crops. Many local cassava and upland rice varieties have almost disappeared. For example, in Huong Nguyen, villagers confirmed that the local food crops are almost no longer interested in their agricultural activities. Many villagers want to convert their swidden land to terraces for commercial tree plantations.

In sum, local villagers in both Huong Nguyen and A Roang have transitioned from being subsistence-oriented swidden cultivators to being enrolled in the highly market-oriented production of tree plantations, mostly acacia and rubber. The return to land with these tree plantations is more financially rewarding for local villagers than swidden. It also demonstrates to local people that they can develop land-use intensification pathways that gradually alter their swidden cultivation.

b. Changes in hunting and non-timber forest products (NTFPs)

In A Luoi, local villagers were traditionally directly dependent on forests for their livelihoods – not only forestland, but also for timber, food, vegetables, and medical plants. Logging, hunting, or collecting non-timber forest products (NTFPs) were therefore important activities.

In order to protect forests and conserve the biodiversity values of A Luoi's forests, over the last four decades, the government, with the support of international donors and NGOs, has already set up strict rules and regulations as well as various interventions to keep local villagers out of these activities, or to promote more sustainable ways of extracting forest products in some rehabilitation forests. Unlike the swidden cultivation, the anti-forest products extraction interventions have mixed results.

Timber extraction and utilization

Traditionally, Katu and Taoi people live in wooden houses. According to observation and group discussions, on average, there are 3-5 new households/year in each village that need to build new houses. Each house needs an average 4-6 m^3 of timber, so for each village, the household demand for timber will range from 12-30 m^3 per year. "*If not strictly controlled, this will be one of the causes of forest degradation in the region*," said district FPD staff [Interview #11, Feb 2019].

Although logging for commercial purposes is prohibited, the A Luoi authorities still consider using timber for house construction or furniture as a traditional feature of local people that should be preserved. Therefore, they allow villagers to cut and use timber when necessary. However, the process of selecting, harvesting, transporting, and using timber is closely monitored by forest rangers and local authorities. In addition, every year since 2014, villagers are asked to sign a forest protection commitment with no logging, no encroachment, no forest law enforcement violence. This is considered a mandatory condition to allow logging for house construction later.

As a result, with the strict rules around forest extractions and the tendency to build houses with modern materials (brick, cement, etc.), the timber demand for housing has reduced significantly.

> "*The procedure is cumbersome, and then it takes time and hires people to collect timber as designated by forest rangers… Calculating the cost can be equal to buying other building materials from neighboring towns*," said one villager [HH Interview #90, March 2019].

In addition, programs on poverty reduction and temporary housing eradication have also applied similar provisions for households that received support. Observations and survey on types of assets in the households shows that more than 80% of houses in A Roang and 90% of houses in Huong Nguyen today are now built of 'modern' materials (bricks, concrete, floor titles). The

percentage of poor households with permanent houses is also quite high (accounting for 70% of the total). This achievement, as I argue here, is due to the contribution of many socio-economic development programs at the central and local levels, of which anti-timber logging ban regulation is the most prominent feature.

Firewood collection

In A Luoi, the demand for firewood in daily life was mostly for cooking, with no demand for livestock, handicrafts, or winter heating. But the firewood demand from natural forests has decreased gradually over time. There are three main reasons for this decrease. First, there are strict rules for accessing and collecting forest products in natural forests. Second, the natural forests are now quite far from villages, while every household has its own tree plantation farms. Villagers, therefore, tend to collect firewood on their farms. Third, with the income from tree plantations, most households currently use gas or coal stoves for cooking, instead of firewood.

NTFP collection

Before the 2000s, there was no market demand for wild animals or NTPFs in A Luoi. Local people hunted or collected NTFPs mostly for their household consumption. However, since Ho Chi Minh Highway was completed during 2005, growing market demand for natural forest products resulted in their rampant exploitation in the region. In this part, I only focus on NTFPs, especially rattan collections because it is still one 'legal' forest-based activity in natural forests and because of the willingness of my respondents to answer questions. With some, there are particular characteristics of current NTFP collections in A Luoi.

First, in the past, villagers freely collected NTFPs in the forest anytime and anywhere, according to the rule 'first come, first served'. However, changes in forest management regulations and forest classification, along with the establishment of Sao La Nature Reserve in 2013, the strict rules in maintaining forest quality or community-based forest management have greatly restricted the areas where villagers are allowed to collect NTFPs.

Second, most of the NTFPs were used for domestic purposes. Villagers only go to collect NTFPs when they need to use them. For a number of NTFPs with high values and high market-demand, such as honey, rattan, mushrooms, conifer leaves, there was a shift from household demand to a commercial model, which has been observed since 2005. The income derived from this activity has become an important household income source for local villagers, especially in A Roang and also Huong Nguyen. As one villager disclosed, "*The forest is near. It takes us just few hours then we can have at least VND200,000/hectare. This amount of cash is useful when we need daily expenditure*" [HH interview #40, Feb 2019].

However, there are differences between Huong Nguyen and A Roang. In Huong Nguyen, as villagers shared:

> "*We have to go quite far to primary forests, in old Huong Nguyen or near A Roang to collect while recently many forest areas are now under managed by other communities. They have their own rules, quite difficult to get*" [FGD #1-8, Huong Nguyen 2019].

The number of households participating in the NTFP collection has thus decreased significantly in recent years. By contrast, due to being right near the rich natural forest area of A Luoi district, people in A Roang are still actively participating in the NTFP collection, especially rattan. The situation is also reflected in the number of households and the scale of procurement of rattan in the villages. According to a household survey, 80% of respondents in A Roang said they participate in rattan collection, with an average of 30-50kg/day/household. In each village, the volume of rattan collection can be up to 50-60 tones/year with the selling price at around VND3,500/kg. The level of dependence on rattan is also reflected in the household economic level in the area. Data from the survey shows that those with no land or less land are the most dependent on this activity, while others undertake this when they have free time.

This set of factors, including 'free' access to NTFPs, market forces and livelihood dynamics, had led to overexploitation of the rattan, especially recently in A Roang. The situation has changed especially since Sao La Nature Reserve was established in 2013, with community forest management and PES implemented in the region. Some new rules have been established to manage and control rattan. Following the Forestry Law 2017 and messaging from some conservation projects in A Roang, rattan collection has been dealt with differently, to become more sustainable and for ecosystem services functions. In the new context, villagers can only harvest rattan within their villages' assigned forest territory. They can refuse the access right to villagers from other villages, while outsiders are totally excluded from the community forests of A Roang. As a result, the access to NTFPs and their extraction has changed from disorderly to being more controlled and organized. Moreover, by participating in forest protection activities, the villagers have now reserved rights to access, and they use rattan legally.

c. New lifestyles of villagers

This transformation in livelihood patterns has brought about a big change in the everyday lives of local villagers.

The improvement of the physical condition of households has been one of the highlights in the locality since the reforestation programs were implemented. Although tree plantation has not yet

brought about high economic efficiency as analyzed above, it has at least helped people with more cash income to buy some necessary equipment, thereby improving their quality of life.

> "*In the past, only a very wealthy family had a bicycle and a radio to listen to the news. But since allocating land to people to plant acacia for economic development, people's lives have changed a lot, especially since the equipment in the family has been improved. Many well-to-do households have improved dramatically, buying televisions, motorbikes, and mobile phones,*" shared one local authority [Interview #7, Feb 2019].

Although the current life of ethnic minorities has changed a lot, people have many opportunities to exchange, learn and share experiences, but the lifestyle of 'Kinh' is popular in the communities, from home accommodation and clothing to daily consumption. It poses the risk of eroding local ethnic and cultural identity. For example, when looking at the types of assets in the family, people tend to invest mainly in the purchase of audio-visual entertainment (TV) and means of travel (motorbikes). Nearly 80% of households in the area have a TV, almost reaching the national level (according to the survey data of the World Bank 2011, 89% of households in Vietnam have a television). Next, the percentage of households with motorbikes and telephones is also very high, nearly 90%. But at the same time, the percentage of household expenditure for production equipment is almost absent. This contrasts with the nearly 80% of respondents who wish to receive government support in purchasing production equipment, seedlings, fertilizers, and pesticides.

People's consumption behavior is also gradually changing. In the words of some locals, they are becoming like Kinh:

> *"In the past, we were still very poor, but we always had savings to save for our children when getting married, when facing difficulties. Now life is better, but not many families have savings. Any household, when we have money, we will be shopping. We follow the Kinh when they short of money they borrow. Many households sell acacia plantations, then buy motorbikes, but they don't know how to drive safely, which is easy to cause accidents; bought a gas stove but didn't know how to use it, didn't have money to change gas after, bought a karaoke and a video player to sing and watch movies all day,"* said the village head [Interview #16, April 2019].

6.2.5 New forest people and fantasies of identity

In this section, I present how the villagers of Huong Nguyen and A Roang repositioned themselves in wider matrices of values, with a particular interest in the interactions between state interventions, their livelihood strategies, and their ideas about their own personhood and identity.

The shift in villagers' beliefs hints at what is perhaps the most important and underexplored question in relation to state-led interventions: when, how, and why villagers change their action toward 'forests' and 'forest livelihoods'. The following stories will illustrate possible explanations.

6.2.5.1 "I am forest grower"

When we visited A Roang in 2019, we met a middle-aged couple (around 45 years old), Mr. Phuong and Mrs. Lanh. They impressed me with their ability to make a good living, having just completed a big house. It is no different from a middle-class house in the city; it may even be much bigger. Mr. Phuong seems to realize my surprise with the house and is very proud. He said the house is "*thanks to the money from acacia*". He made a powerful statement that emphasized their interest and profit from the acacia plantation.

The couple has 10 hectares of acacia and three hectares of rubber plantation. The area has gradually increased over time since they started planting acacia in 2003 and rubber in 2008. They were "*the first acacia farm owners*" in A Roang. In 2003, when most people still considered acacia to be a 'valueless tree', following information from relatives in Nam Dong, they decided to try planting one hectare of acacia on the old swidden field that Mr. Phuong inherited from his parents. After seeing the profits from the first harvest, they made plans to invest more into acacia plantation. As Mr. Phuong explained:

> "*Before we tried to plant rice paddy, and also several agricultural project support to plant fruit trees or vegetable. But I realized that cultivation is labor intensive. We also could not find market for these. Livestock production is not profitable (easy to die). Raising big cattle as cow or buffalo needs also investment*."

Rubber was also promoted in A Roang in 2008 but they are not really interested.

> "*We planted around two hectares in 2008. But our farm is nearly natural forests, animal ate most of them. We have to wake up very early around 2:00 am to collect rubber latex. Now there is only about 0.3 hectares. It's time we can collect rubber latex. However, we need to invest in tool and get up early, around 2:00 am to collect latex. It's a bit hard*," Mrs. Lanh shared.

They also stopped investing in wet rice cultivation. They explained that for their small paddy fields, there is no water, and the productivity is not high. Stretched for labor, they leased the two fields to other households in the village. In addition, as Mr. Phuong argued, rice is now available in the market and as long as they have money, they can buy as much as they want.

All of these livelihood activities cannot compare with acacia plantations, into which Mr. Phuong decided to invest every single Dong, because "*we don't want to invest our labor and capital on difficult and unproductive activities*". Money from the first acacia rotation was spent on new seedlings for the next rotation, but also on labor (mostly relatives and neighbors) to expand their farm. At that time, unused forestland surrounding A Roang was still abundant and there were not many people planting trees, so they had the advantage of being pioneers. For Mr. Phuong and Mrs. Lanh, acacia plantation is a sustainable and profitable activity: "*It is very easy to grow. Even you don't have money to buy seedling, you can ask people surrounding or even just burn your land, acacia will grow*".

Similar to Mr. Phuong and Mrs. Lanh, around 80% of surveyed households in Huong Nguyen and 90% in A Roang mentioned that they have acacia and/or rubber plantation areas. Some households have less than one hectare (15%), but other households have more than five hectares (27%). The majority of households have an area of 2-3 hectares. Further, nearly 96% surveyed households in both Huong Nguyen and A Roang highlighted they want to "*expand their acacia farm*" and expect "*the government can allocate more land to them*" in the future to improve household income.

Further, planting acacia makes them feel they are "doing a great job":

> "*I am not the forest destroyer anymore but helping the government to restore the landscape, at the same time, we gain money and can send our children to cities. I feel we are now not really different from local people from the lowland. Acacia plantation makes this huge change*."

The conversation with Mr. Phuong and Mrs. Lanh demonstrates that the couple really saw themselves, and wanted to be seen by others, as 'forest acacia growers.

During the fieldwork, I observed that Mr. Phuong, Mrs. Lanh, and others felt proud of their achievements as the result of a long journey to get out of economic and cultural disadvantages. For them, acacia plantations played a big role in helping to make the big change. In early 1990s and even 2000s, according to group discussions, most of villagers said they barely managed to produce enough food and income to ensure their subsistence. The situation has changed dramatically over the last three decades.

At the same time, the villagers faced cultural stereotypes because they belonged to an Upland ethnic minority group. The Kinh majority, central government, and development organizations generally stigmatized ethnic minorities. They blamed the low levels of economic activity, knowledge, and awareness among ethnic minorities on their supposed backwardness and resistance to change (To 2017). Thus, successive external interventions have been designed and

implemented over the last four decades to remake both the post-war landscape and people in A Luoi. However, for A Luoi's villagers, these 'stigma' interventions are particularly viewed through different lens. They did not say the state interventions were bad or tried to resist. On the contrary, they considered them a form of support from the Kinh people and central government in the lowlands [FGD #1 and #8, Feb and April 2019]. Since the Nguyen dynasty, Katuic people have recognized their existence by the low-land people, as tribal groups on western Uplands.[40] They were described as the people who live in dense forests and do swidden cultivation and were registered individually in the official record system for taxation purposes. They lived with this prejudice for a long time until North Vietnam found a footing and invited them to participate in the alliance to fight the French and Americans. Participation with North Vietnam to gain the victory for the nation is considered a big achievement for them that allowed them to stand out and level up their role to be equals with Kinh people in the lowlands.

When the war receded, Katuic people in A Luoi were no longer battling for peace but rather the desire to gain modernity and development. Leaving swidden and subsistence cultivation to become commercial tree growers was of great importance for villagers. One way to become modern and show their pride is to continue as equals with the Lowland people, whom they called 'close ally' or 'brothers'. In contrast to the scenario of resistance elsewhere, in A Luoi, we observed the aspiration of villagers to articulate resourceful what they perceived as supports from the governments, all whatever they have in hand as their abilities and their fantasies of identity to develop. And the emergence of acacia in this case somehow helped them to achieve their fantasies of identity.

The villagers are not only living their fantasies, but they are making investments to acquire it. They work hard to maximize profit in the acacia plantations. In addition to taking care of their own acacia forests, in their spare time, the villagers also work as hired laborers in the commune or neighboring districts to earn extra income. I repeatedly heard during the course of my fieldwork villagers say, "*We picked up and save every single Dong to invest in growing acacia*". Their focus on profit and investment made them stand out because such a strategy had been unthinkable just a decade earlier. Thus, nearly 95% of the surveyed households highlighted "*they want/plan to expand their acacia farms*" in order to attain their dreams for the future: to "*build a bigger house*" and ensure "*children have a better education condition and get monthly salary job*" [HH survey, 2019].

[40] The Nguyen includes nine lords who governed Indochina from 1558 to 1776, and the 13 kings who were direct descendants of these lords officially ruled the country from 1802 to 1945 (Trinh et al. 2016).

6.2.5.2 "I was an illegal logger, but I am now forest protector"

In the buffer zone of Sao La Nature Reserve, surrounded by vast natural forests that are strictly managed by other entities, the topics of illegal logging, deforestation, forest law violations, or effectiveness of forest protection were not an easy matter to talk about with villagers at the first meeting. During the first one or two months in Huong Nguyen and A Roang, I almost gave up on these topics. I had only general information about the village's forest protection groups through the local authority reports. Even in our household survey, when we asked about the reasons for participating in forest protection, the most common answers we received were very superficial: "*the state program*" or "*the state regulations*" [HH survey 2019]. However, when I stayed longer, and villagers got to know me better as a PhD student trying to understand how they live, rather than a spy for some state entity, many stories emerged.

For example, the story of Mr. Ho, a 65-year-old man who looked much younger and more robust than his age would suggest. He looked at me and asked, "*What, what do you want to ask? You come because somebody told you that I was a famous illegal logger in this area?*" In a slow and steady voice, he told me his story. In the early 1990s, he was a local police officer. Living in the forest region, the main job of the police is to assist forest rangers or state-forest owners in catching illegal logging cases. "*Everything in the forest here, who does what and how, I know it all*," he said.

Born and raised in the forest and as a police officer who must have understood the law, Mr. Ho surprised me when he strongly asserted that he was once an illegal logger. "*I gave up being a police officer and persecuted our local villagers when they got something from forests because I felt it wasn't fair,*" he said. Like many Upland localities in Vietnam, forests were nationalized under the management of the state forest enterprise (SFE) system right after the war. Here, it was A Luoi SFE. Their activities were mostly timber extraction. There was a role reversal during that time. "*For us, they are outsiders who come here to exploit the forests. But through the state regulations, we, whose people living near the forest region for a long time, suddenly become outsiders*," he said.

However, since the early 2000s, the forest owners around here have turned to forest protection activities instead of exploiting, according to the government logging ban policies, but

> "*…they can't protect the forests. How can one officer protect 1000 hectares. They even abet illegal loggers (to be honest, like me). They are just outsiders. They simply come here to work, receive a monthly salary, and then go home. They have absolutely no motivation to protect the forest here*," Mr. Ho still shared in his anger.

I saw similarities between the story that Mr. Ho told and the stories that have been highlighted across the Vietnamese Uplands (Hoang 2007; McElwee 2004, 2016; Sikor and To 2011; To 2015). The image of the Uplanders, from the perspective of the government agencies, is one of 'forest thieves' or 'forest destroyers' rather than forest people who are living their lives (ibid.). But this is the first time we have heard the perspective 'from below' on how the state-forest entities carry out their job. When I asked who should carry out forest protection, Mr. Ho said, "*The locals, of course*". Starting in 2011, under the A Luoi's district FLA program and with support from several conservation and development program, Mr. Ho's village was assigned to manage and protect nearly 100 hectares of natural forests near their village. This came after nearly 50 years of being 'forest outsiders'. As a respected figure in the village, Mr. Ho was elected as chairman of the community forest management council. "*I am forest protector,*" he said.

The story of Mr. Ho's role transition is perhaps unique and not representative of the many other villagers. But it does reflect the entire story of transition of forest governance from centralized state management toward shared responsibilities amongst stakeholders, especially villagers, in forest protection (Dang et al. 2018). It is also a reflection of the way 'environmental subjects' such as Mr. Ho have been shaped with their own environmental subjectivities. The changing role of Mr. Ho toward forest protection cannot happen overnight. It is a process of growing awareness through his own observation and direct participation. This is a justification of his personal transformation into someone who cared about forest protection. It is also not just the top-down approach by the successive state interventions in forest governance. For people like Mr. Ho, forests are their living environment, their memories, the place they belong. They now have a chance to protect their village's forests: "*For us, it is life, it is the way we live,*" as Mr. Ho said.

The conversation with Mr. Ho demonstrates that villagers saw themselves, and wanted to be seen, as forest protectors. They not only lived their particular "fantasy of identity", but they also invested significant material and symbolic resources into acquiring it. They themselves create their own setting to manage the natural forest areas that were allocated to them. In each village or group of households, a protection team was established. The team takes charge of patrolling forests to which they have been assigned. Each team includes a management board, which is set up by transparent voting among villagers (one person per household serves as a representative, and both men and women are acceptable). Each household participating in forest protection needs to sign a commitment letter with the group, local authority, and forest ranger. This document refers to the commitment among villagers to participate in community forest management. The management board includes one team leader and two vice-chairs who coordinate all activities of the village/group, and one member who manages finances. Besides this, the participation of each

household in forest patrolling activities also has been documented. These reports are used as evidence for distributing benefits (mostly by cash) afterward.

Across the different villages and groups of households, I found diverse ways of setting up the management of community-based forests, in terms of new rules in how forests are protected and organized, and in terms of benefit-sharing. In Huong Nguyen, for example, the groups were formed on the basis of voluntary registration among members, who manage a forest area of 40-50 hectares. In each group, the leader is often the head of a clan or elected by members, and acts as a representative, coordinating activities and distributing benefits among members. Depending on the group, some patrol their allocated plots every two weeks, some only once a month, while several others have never patrolled. Group rules related to forest management, which detail the local activities allowed, have not yet been discussed in many groups or between groups.

In A Roang, under the support of several conservation projects, five of the seven villages of A Roang have been allocated 508.25 hectares of natural forests. This intervention has revived the collective customary system to both protect forests and gradually improve villagers' livelihoods. The entire village collectively holds a land-use rights certificate, receives a share of the revenues from the state forest protection program, as well as other collective forest activities. The financial sources for the community-forest management model operate here as Mr. Ho's village are mostly come from Payment for Forest Ecosystem Services (PES). As a result, PES has provided significant income for households in both A Roang and Huong Nguyen. Each household has received around VND 0.5-2 million/year (US$22-87/year), accounting for 3.5-13% of their average annual income. However, this amount is often paid out intermittently during the year, so local villager cannot remember exactly or underestimate PES among their total income.

By gaining more land autonomy through community forests, local villagers also increase their investment in protecting, managing, and restoring their own forests. As mentioned in the previous section, it is clear that the collection of forest by-products is becoming increasingly difficult as most of the natural forests are owned and strictly protected. The villagers understand that if they regulate their actions in their own forests and "*restrain their current consumption levels their needs will be met indefinitely into the future*" (Agrawal 2005:229). The idea therefore also transfers through the new activities within the community-based forests. In A Roang, all five villages have zoning activities, in which they identified some areas for rattan plantation, harvested rattan seedlings from natural forests nearby, and planted them in their own forests.

> "*Villagers here are highly dependent on rattan collection from natural forests. But now, the state forests surrounding them are very restricted. Fortunately, we got support from*

the projects; now, we grow rattan in the community forests. It helps to enrich the forest, but also exploit rattan in the future," said one villager, explaining the rationale behind the rattan plantation inside their community forests [HH interview #130, April 2019].

The investment in protecting their own forest not only shows through the good operational setting, the restoration, and enriched forest resources, but also through villagers investing in their own capacity to protect the forests. During the village meeting in April, when we asked the group of villagers to draw a map of the village and their community forest for discussion. The village head, Mr. Ton – a 35-year-old man – opened his phone and turned-on Google Earth. Perhaps realizing our surprise, he quickly said, "*Everyone has a phone now. Even illegal loggers now also use satellite images to find timber. If we want to protect our forests, we must know where it is and what it has and have to update new technology.*"

Through this story, we can see that the local people, who were considered forest destroyers in the past, are extremely active in protecting and developing their own forests. Part of their rationale for doing this was financial support, even though most households said that "*payment is not much*". But when asked whether they would stop protecting the forest if there was no payment, villagers said they would continue to protect the forest for several reasons, which can be summarized by a response from the household survey: "*The forest keeps the environment conducive for better yields on their villager rice paddy*" [HH survey, 2019]. But perhaps more important than financial support, another outcome of the forest governance transition is the increased level of awareness of local villagers about the natural forests, the boundaries, and the value of preserving forests. All that matters and formed the identity of the new forest protectors. Rather than just doing forest protection as part of state regulations or to receive payment, villagers are protecting forest because it is "*a good thing to do*", "*for our own forests*", and "*for future*" [HH survey, 2019].

6.2.5.3 The people who are struggling 'in between'

a. "We are working hard but still poor" – the ones who are left behind

Some villagers were in less favorable positions than Mr. Phuong, Mrs. Lanh, or Mr. Ho to realize their fantasies. For example, a young 30-year-old couple, Mr. Minh and Mrs. Van Anh, were in a precarious position. We first interviewed Mrs. Van Anh through the household survey (Mr. Minh went to work and was not at home during the interview). They have two children who are in primary school. According to the household survey, they are one of the poor and landless households in the village. Previously, they lived in the same house with Mr. Minh's parents. They moved out in 2017 and are living in a small house with acacia wood walls and a palm roof. The

couple do not have their own land but mostly work with their parents and two other couples on 0.3 hectares of wet rice paddy and 1.7 hectares of rubber plantations. They do not have land for an acacia plantation.

At the end of the interview, when she got to know me better, Mrs. Van Anh began to share. Her husband does work far away but works as a hired laborer for illegal loggers. He usually takes a trip for two weeks to one month, while the payment depends on what they get from the forests. Compared with the main trend in the village, where everyone is aiming to become commercial acacia growers and participate in forest management and protection. This is probably one of those exceptional cases.

More than two weeks later, passing by their house, Ms. Van Anh called us back: "*Van, come here. My husband is home if you want to talk with him*." With both of them, we listened to their story closely. The problem for couples like Ms. Van Anh and Mr. Minh is that they do not have enough land for cultivation. Mrs. Van Anh was also too weak to engage in wage labor. Ten years ago, Mr. Minh also tried working far away in the city. But without knowing anyone, he worked in a wood factory in Da Nang, a city around 100 km away from A Luoi. But after three months, the owners disappeared without paying his wages. So, he returned to the village empty-handed. All viable sources of income were cut off, so Mr. Minh engaged in illegal logging activities. "*I have no choice. Even I know being illegal loggers now is not good at all, but I have no choice*."

As Mr. Minh was an illegal logger, their opportunity to pursue the second 'fantasy of identity' of becoming forest protectors has become more difficult. With the expectation of gaining some financial benefit from the forest protection program, Mrs. Van Anh also wanted to participate in a group of households receiving an allocation of forest lands. But she complained:

> "*We don't get the trust of the other villagers as they all know what my husband doing. I also felt embarrassed when I signed the commitment to protect the forest. Even our father, he was a veteran from the American era. He is very disappointed because he spent all of his life helping the government, and his son now become illegal logger*?"

Mr. Minh said, "*The whole community looked at us with disdain*." Other villagers do not trust them to possess the required normal ability for becoming both forest growers and forest protectors. Their fellow villagers saw them as the couple who had problems making ends meet and were unable to work. The forest protection team leader even refused their right to participate in planting rattan in their group household forests because he did not have confidence in their ability to participate. As a result, Mr. Minh continues to engage in illegal activities in forests. And it seems

that the road back to a normal villager is becoming more and more distant. However, at the end of our conversation, they both still expressed their desire to become a 'normal' villager.

> "*If I had enough land to grow acacia, for example, about 2-3 hectares, I also wants to stay at home to be near his wife and children and focus on doing business. But there is no joy in being an illegal logger when you have to staying in the forest, forest rangers raid, break the law and endanger life*," Mr. Minh shared.

As mentioned in the previous section, local villagers in A Luoi initially welcomed new economic opportunities provided by the government reforestation programs. The market forces and their fantasies of modernity influenced all villagers, both rich and poor, to thrown themselves into the acacia plantation. Just as Mr. Phuong and Mrs. Lanh had the 'advantages of the first-comers' with land resource advantage, some households became commercial tree growers and were seen as such because they generated sufficient profit to invest back into production. This inspired others, even though many of them are not yet commercial tree growers, or are currently unable to become them, as in the case of Mr. Minh and Mrs. Van Anh. The young couple is at a disadvantage because they are struggling 'in between' and do not have an alternative plan to fit their circumstances and possibilities. They are at a double disadvantage with the way to find land for acacia. When all villagers rush to transition to tree growers, the demand for land increases dramatically. Thus, the ability of some villagers to transition quickly directly inhibited the chances for others with fewer advantages to attain the same dream.

b. The dilemma of 'fantasies of identity': forest protector or forest grower?

"*…They burned my acacia and rubber farms for revenge because they assumed that I was the one who informed the forest rangers about their illegal encroachment*," said Mr. Vien, the leader of a forest protection team in the annual meeting on forest protection. His story reveals some sense that a new conflict has emerged.

The forest land allocation and tree plantation initiatives that began in the 1990s have prepared the ground for the booming of acacia plantations we see today in A Luoi. As the acacia boom takes place, there is a rapid increase in changes od land use for the cultivation of acacia. However, this is not only a process of massive land-use change; it is also a process where people acquire land in varying ways to expand their acacia farms (see also Chapter #5). This new land acquisition dynamic poses the question of where villagers can gain access to land in A Luoi? All unused or barren lands have already been used for intensive cultivation of acacia, rubber, and several other crops. At the same time, forests nearby are now under strict management of state forest owners and communities, as well as groups of households. The situation reduces local villagers' access to

new farmland. The desire to become forest growers, as mentioned above, has made the situation increasingly difficult for villagers. They have thrown themselves into the land hunt and intensified competition between one another to gain a piece of land for acacia. “Land hunger” is how the villagers described their land rush situation.

The land hunger makes villagers start looking at the forests that they were allocated. They found reason to excuse their responsibilities to protect the forests. “*I do not see the direct benefit from protection of forests*,” one village head said in an interview. “*The allocated forest is very poor, no big timber. If we convert these poor forests into acacia plantation, we can earn VND40-50 million/hectare/3 years, much higher than VND 400,000/hectare/year of forest protection payment*” [Interview #17, April 2019].

Villagers also considered the opportunity costs between tree plantations and forest protection. First, as Mr. Vien’s story highlights, a number of local villagers (63%) mentioned their concern of ‘safety’ in forest protection as the biggest challenge or barrier to prevent them from becoming ‘good’ forest protectors.

> “*It’s very scary. Even if we go in a group, but the illegal loggers/forest destroyers have weapons. If forest rangers get accidents during forest patrolling, they have insurance and supports from the state. For us, nothing,*” said a community forest protection team member [HH interview #147, May 2019].

Second, the opportunity cost is the solidarity among villagers, as he explained: “*What you are going to do if the forest destroyers are your neighbors, relatives, or siblings? It really awkward*”. Last but not least, the compensation from forest protection at the moment cannot compare with the profit from acacia plantation. For example, each person earns between VND100,000-150,000/day (US$5-6/day) through patrolling, which is half of what villagers can earn from wage labor doing other activities. Villagers do not consider the payment worth the effort put into it.

The local land hunger has also made the forest protection activities increasingly challenging to get consensus among the group members and between the groups. “*They [another group] protect their group forests but encroached into our forests*,” said one group member [HH interview #70, March 2019]. Furthermore, feelings of inequity begin to shake their motivation to protect forests, as one villager stated, "*We are complying, but they do not. Then they have land, we are landless*” [HH interview #81, March 2019].

6.2.6 Discussion and conclusion

This paper examined how villagers became 'environmental subjects' as they actively participated in state-led policies and interventions over the last three decades, and adopted conservation attitudes, behaviors, and new identities to foster forest changes. The case study of A Luoi in central Vietnam, the piece demonstrates some key points.

State-led interventions started promoting tree plantation programs to re-green barren hills and provide new livelihood incentives to Uplanders. Literally, forest protection programs also changed their approach to encourage the participation of villagers in forest protection and revive and support their collective traditions. Over a quarter-century on, these binary 'environmentalities' (cf. Agrawal, 2005) have evolved in ways that are surprisingly complimentary so much so that they are starting to converge. New forest livelihood patterns have formed clearly within the landscape of transition, including commercial smallholder tree plantations, PES market-based forest protectors, and commercial non-timber products collection. This new pattern was co-produced, in that local villagers first modified their own traditional forest practices and livelihood strategies to adapt to the state forest-related interventions. A new pattern has really taken off with new market opportunities and their own 'fantasies of identity' (Moore 1994). It is a picture of lucrative forest-based livelihoods that the government and local villagers themselves have drawn together. It is an inspiration that involves the whole community, whether rich or poor, old or young.

Both ways have transformed swiddeners/forest destroyers/forest thieves and produced new 'subjects' who act positively towards forests in terms of increasing forest cover and protecting forests. There are two main new *environmental subjects*, as we called new forest people in the paper: forest protectors and forest growers. They each have formed their own 'environmental subjectivities' to remake Uplanders into the ideal subjects the state has desired. Among the failures of anti-swidden, modernization, forestry, and development policies in many other places, the case of A Luoi provides the exception. It proves that the environmental policies and interventions could be articulated to correct each other and then achieve long-term environmental outcomes. It also shows that the ability of the State to remake uplanders into their ideal subjects, as 'new forest people' as I described here.

The story of becoming commercial forest tree growers here is ground-breaking for many other Upland villages in Vietnam where subsistence production and poverty reduction remain primary concerns to many households. Far from the previous literature that showed community resistance toward anti-swidden cultivations and Upland transformation (Mertz et al. 2009; Pham, et al. 2018;

McElwee 2020; Sikor et al. 2011; To et al. 2017), the findings from A Luoi reveal a different phenomenon: the transition of swiddeners to new Upland farmers. The transition actually matches the image propagated in government policies, publications, and the media: "*permanent crop fields and village sites and new jobs, all to reduce poverty while protecting forest*" to "*enable Uplands to catch up with the Lowlands…[and] ethnic minority groups to catch with the Kinh*"[41]. It was no coincidence that Mr. Phuong and Mrs. Lanh described their success in the same terms as the numerous newspaper columns and television stories on Uplanders 'doing a great job' and building new lives based on plantation forestry. The discourse around these commercial forest growers thus could become hegemonic across contemporary Vietnamese Upland regions, where smallholder forestry has been promoted and gradually expanded recently.

The story of Mr. Ho's role transition is perhaps unique and not representative of the many other villagers. But it does reflect the entire story of the transition of forest governance from centralized state management toward shared responsibilities amongst stakeholders, especially villagers in forest protection. It also reflects how environmental subjects with their own environmental subjectivities, such as Mr. Ho, have been shaped. The changing role of Mr. Ho toward forest protection cannot happen overnight. It is a process of growing awareness through his own observation and direct participation in forest protection. It is also not just a top-down approach by the successive state interventions in forest governance. It is a process of personal transformation into someone who cares about forest protection. For people like Mr. Ho, forests are their living environment, their memories, the somewhere they belong to. After abandoning his actions as an illegal logger, he now has a chance to protect his village's forests.

The state binary environmentalities have brought new views about how uplanders value land and access forests but have also enabled social differentiation by individualizing rights to land in A Luoi. However, as we described in the four examples above, not all villagers are moving at the same pace along the transition process. Some villagers have their fantasies of identity and invest in the dream of becoming forest growers; others desire to become forest protectors. Some want both, whereas others could not have either, or were stuck somewhere in between. In the traditional 'moral economy' or 'shared poverty' of Upland villages (Scott, 1976), different classes of forest growers, forest protectors, and those who are still forest thieves/forest destroyers have emerged. The transfer of land certification to individual households three decades ago prepared the ground for tree plantation commercialization and created the conditions for this emergence of new kinds of socio-economic differences among villagers as landlords, tenants, or landless. Like Mr. Phuong

[41] See footnote 41

and Mrs. Lanh, the landlords were able to generate profit because they were the pioneering people who gained access to land when it was still abundant. Others, such as Mr. Hai and Mrs. Van Anh, began seeking land recently during the closing frontier and their land hunt seems impossible. Thus, this paper presents not only the story of social stratification, but also the story of those left behind in the transition toward new forest people.

The findings show that the ‘forest people’ transition in A Luoi can lead to new tensions when when villagers fall gradually fell into the dilemma situation and stuck between the two ‘fantasies of identity' that the government and villagers drew for themselves: the forest protectors and forest growers. Whether or not these new subjectivities will lead to long-term sustainability of forest management in the region is a question that remains open.

CHAPTER 7

Conclusion

7.1 Preface

Vietnam is the first country in Southeast Asia to succeed in turning around from a high deforestation rate to large-scale reforestation. However, the official data and research have shown the forest transition in Vietnam is superficial and much less smooth than the forest cover curve presented in diagrams. The trend is towards 'transaction' over transition (Cochard et al., 2020). The increase of forest cover by plantations cannot cover the loss of natural forests and cannot compensate for the ecological protection and disaster reduction functions that natural forests can bring.

As mentioned early in this dissertation, consecutive storms, and severe floods in the Central region in recent years, especially in mid-November 2020, have caused not only great damage to people and property but also revealed large 'breaks' in forest management and pose several questions related to the 'quality' and 'sustainability' of contemporary Vietnam's forest changes. At the same time, 2020 was also the year when the Ministry of Agriculture and Rural Development began to review the 15 years implementation of the *Vietnam Forest Development Strategy 2006-2020 (VFDS)* to identify the new pathways for the forestry sector in 2021-2030, and a vision towards 2050. A public consultation process for the new strategy was organized, from when the first draft was revealed in August 2020 until right before the approval of new VFDS by the Prime Minister in April 2021.

This moment of storms and policymaking made room for critical discussion across all levels, including academia, policy makers and also the public. Top priorities in the discussions have included answering questions like "What transition has actually occurred - what is its real shape?". Or, "What lessons from the past thirty years are relevant to developing the next strategy, in order to solve existing challenges and take advantage of opportunities?" In addition, my three research questions thus center attention to policy, particularly forestry reforms that decentralized land tenure and payments for forest ecosystem services program; to control and access of land as driven by state, market, and local actors; and the implications for socio-economic on the ground. My research and also the dissertation hence has arrived at the right time that allows me to contribute to the discussion.

In this section, I seek to explicitly integrate the analysis from the whole thesis, revisiting the findings and conceptual challenges laid out in the previous chapters and arguing for the relevance of the analysis developed here to highlight the empirical and theoretical contributions of the dissertation as well as its policy implications.

7.2 Contribution

Political Ecology of Forest Transitions in modernizing Global South tropics

This dissertation does not break new ground by just illustrating a case of forest transition (FT). A number of scholars have already done extremely important work in describing FTs and identified the main pathways across various contexts, regions, countries, and communities. I also do not wish to rehash the debates over the models of FT in this dissertation – not because they have been settled but because others are far more theoretically engaged than I have been.

While forest transition can certainly be read through my dissertation, I take a different approach. I have attempted to go underneath the 'superficial-smooth' curve of the increase of forest cover to look in-depth at its reality and discover social dynamics that underpin processes of forest transition. I thus do not aim to focus on the prediction or criticism about the results of the FT or how 'good, bad or ugly' it is, but rather try to understand the process by which actors shape and reshape forests to make the transition happens.

To do so, I develop an analytical framework for exploring the making of forest transition within a historical and geographical perspective through the lens of Political Ecology. Reading FTs as a political and socially made process allows me to integrate a normative research agenda with in-depth analysis of complex human-ecological interactions to gain insights into the process and draw the contours of FT.

FT studies are predisposed to focus on 'quantity', highlighting a data curve that connects point to point about forest cover. Going beyond this stereotype that FT is a linear and predictable process (Meyfroidt and Lambin 2011), in the dissertation, I use the concepts of 'territorialization', to read the FTs. Rather than 'point to point,' the new heuristic approach allows me to draw 'a landscape' of FT production.

Within the landscape of FT production, I investigated how various actors – from the Government to differentiated villagers – become implicated in the production of FT. Rather than who, it also leads me to examine the actor's power, agency and politics along the process as well as discover new emerging issues that may not have received sufficient attention. For example, analyzing the large-scale reforestation program through the lens of forest tree plantation booms opened up a complex world of land acquisitions (Chapter #5), or analyzing how emergence of 'ecosystem services' and related payment schemes opened up a new world of governance of common-pool resources (Chapter #4).

I have analyzed the power and politics in the making of FT through examining the design and implementation of successive policies and intervention. As McElwee, (2016) highlighted, these policies are not static (as designed originally) but are transformed by knowledge networks, people's resistance, and the physical properties or resources. Through my research, I argue that actors, in the upstream-downstream policy design and implementation process, have their desire, aspirations, identities, and the capacity to act and make their own choices. The Government's objectives 'from above' can thus be transformed and modified through the diverse implementation pathways to create diverse and unpredictable outcomes.

I first pay a great attention to the traditional relationship between the government and villagers, or 'from above' and 'from below'. State power through their successive intervention normally is framed as dominant in the making of a FT. However, forests continue to be important for the lives and livelihoods of villagers, especially upland people in the Global South. In Vietnam, the site of my research, up to about 25 million people are still dependent on forest resources (especially forestlands) (VAFS, 2009). Despite about 70% of forests (and lands) still being in the hand of state forest owners (MARD, 2021), the area in the hand of local peasant producers have been increasing significantly. Therefore, it is crucial to shed light on and switch the research focus to local villagers' agencies and their role in the FT-making process.

Switching the focus to 'from below' also allowed me to re-visit traditional state-peasant relations. Going beyond the culture of control by the State and resistance by villagers, I argue the political reactions 'from below' have been vastly more varied and complex than is usually assumed. I discovered a case in which villagers, far from being passive victims or resisting the above interventions, navigate creatively and resourcefully whatever they have in hand to acquire land for acacia plantations. Thus, they are actively key actors in making forest transitions through creating a new territory that I called 'smallholder acacia plantation territory' in the thesis.

I also investigated state-villager relations by examining how institutions have been changed, re-arranged, re-constructed, or subjected to other types of adjustments to articulate with the new policies and interventions. This allows me to discover the crucial role of local collective institutions and historical, social and ecological conditions in facilitating but also hindering state objectives, as the example of collective PES models (Chapter #4).

This is why 'from above', the state forest policies lead to a wide range of organized and everyday reactions, resulting in different outcomes of forest changes in different localities, as recorded in many previous publications on FTs. In contrast with state-centric pathway dominant in FT literature about Vietnam, I documented a new pathway in which the making of FT springs from

multiple sources and locations. This pathway, involving much interaction between the actors across scales. may start from above but is then articulated from below. It is the force that squeezes the toothpaste tube but does not shape the internal mechanisms of what toothpaste come out. It looks messy with different types of reaction, from resistance, acquiescence, or incorporation; but the messiness works out and create various outcomes. It is a type of 'co-production' shaping on the on-going forest transition. This approach thus also allows me to explain the 'unevenness' of FT in Vietnam, with more nuanced stories of FT at different localities. It also proves that the FT process is not just superficial smooth, simple, linear movement from net deforestation to reforestation, but characterized by a fuzzier and more contested reality.

The stories of A Roang and Huong Nguyen, as my main research site, are perhaps unique in the sense that these changes took place then and there. But what FT happens in practice becomes truly interesting when it is related to other broader inquiries on the political ecology of forests, agrarian transformation, and sustainable development. Better understanding the process, mechanisms, and by whom that happen will contribute to comprehending how a tropic FT is related to social changes and whether a FT is sustainable in terms of social (and ecological) safeguards? Along the process, the ways in which local villagers engage in both activities, plantation, and protection, and the implications in terms of land control, livelihoods, and even Uplanders' identity, are also important areas of investigation in the dissertation.

In sum, one can conceptualize a Forest Transition as a 4D process, to show that the smooth curve of forest cover change hides many other processes in time and space, and across structures and agency (see Figure 18). The FT-making process is (i) a layer-upon-layer process of territorialization over every single forest space; and (ii) a co-making process, a negotiation, collaboration, and sometimes resistance among various actors – in this case particularly between the will of the State and villagers' reactions. This conceptualization can also accommodate the complex power relations of forest change dynamics and also identify the emerging dynamics along the process.

As in the dissertation, it allows me to identify four different types of transitions: (i) the state-peasant relations transition, that going beyond the control-resistance but 'co-production'; (ii) the emergence of ecosystem services as a new value of forests, leading to a forest governance transition; (iii) the forest tree plantation booms and a land control frontier transition; and last but not least, (iv) forest livelihood transition and the formation of new forest people. All these layers connect, blend, articulate each other through different 'push-pull' mechanisms, including tensions over forest resources and then re-construction through efforts to fix or new interventions; market-based initiatives and shared governance among actors but still sometimes the countermovement

to keep and maintain the control of the State; new institutions but building upon from the existing institutions; and the legacy of the past and their revival in the new context. The shape of FT making is an evolutionary process, in which the past enters the present, not as a legacy but as a novel adaptation. The analytical framework thus inclines me to see the anticipated forest transition as much less certain or less predictable than the previous FT literature might have.

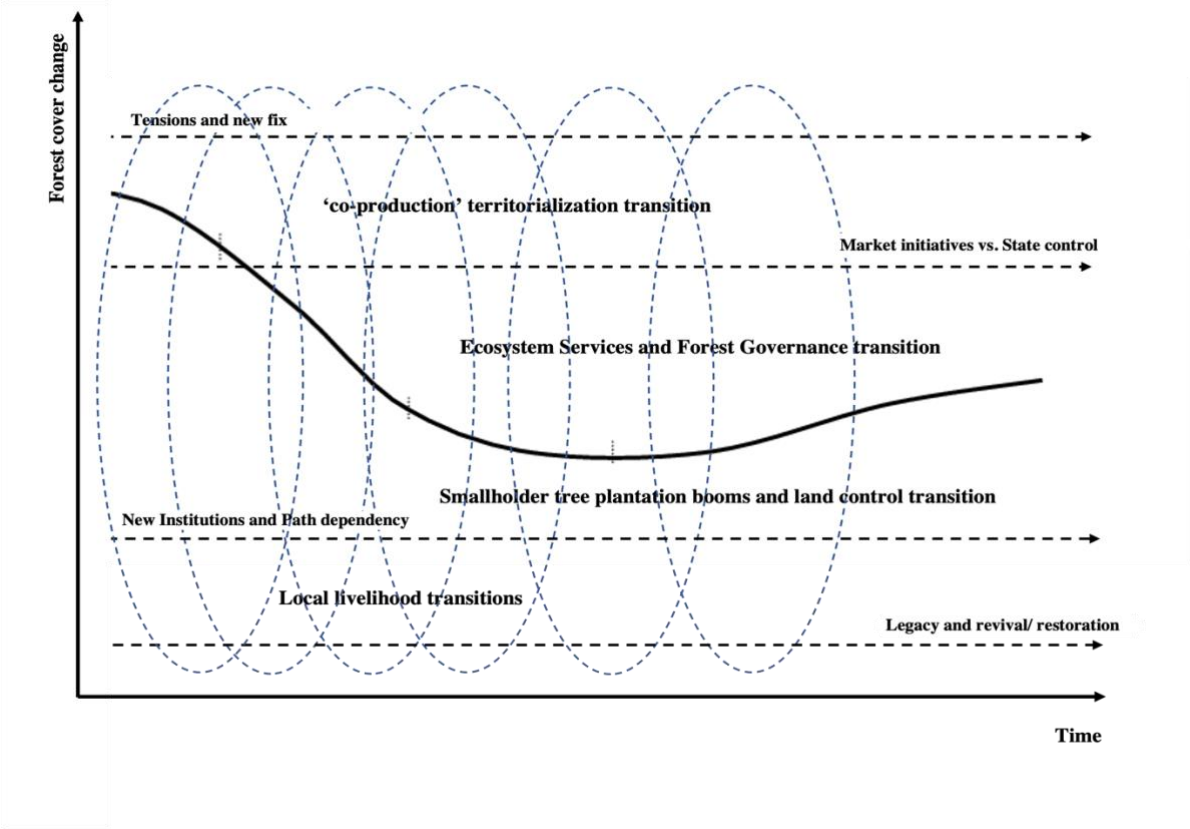

Figure 18 - The 4D Forest Transition

7.3 The missing pieces and future research

During the 3.5 years of my Ph.D, I always asked myself, "if I can do my research again, what would I do differently or what I can do better?". This question helps me identify the missing pieces in my dissertation and poses several new directions for future research. Revisiting my conceptual framework and empirical data, there are four remaining questions that related to four components in my thesis that I want to discuss here (see Figure 19 below).

First, in the landscape of FT-making, there are more than just the from above State with their policies/interventions or from below local villagers as I set priorities to pay great attention in the dissertation. There is the missing middle. I name them under the notion of 'middle actors', that including researchers, NGOs, international donors, but also can be provincial, local forest agencies, forest management boards, state-owned forest companies, private sectors investing in

forests, or just local forest rangers, and so on. Some of them perhaps play a role as ‘filters” for transmitting messages from bottom-up or from top-down, doing the translation and adaptation on the way. While others maybe are ‘initiators’, or actors whose choices (like an entrepreneur and investor creating a medium-scale wood products) might shape the demand and the market and push the expansion of tree plantations. All of them thus play a middle role in changing the forest systems and transition pathways. Instead of the dichotomy of ‘top-down’ and ‘bottom-up’ in the making of FT as I described in the thesis, potential ‘middle out’ pathways are there that are crucial to investigate.

I could also have taken more into account non-human actors, such as the acacia trees, which also have their own agency in the making of a forest transition. This is missing part that I would like to further explore in order to complete a landscape of FT.

Second, to make systemic changes, one needs to consider two essential elements. They are: (i) actors’ agency – the abilities to make their own choices; and (ii) their capacity, which refers to actor’s abilities to perform the choices they made. In the dissertation, I paid great attention to actors’ agency, power and politics over forest resources to make the FT happen. What is missing to make the real changes and embracing the ‘uncertainty’ that I identified is actors’ capacities. They idea of large-scale reforestation programs cannot come true if the actors, as local villagers, for example, do not have enough abilities to perform their tree plantation role. Similar with the implementation of PES, forests cannot be protected if the actors are not capable enough to perform their protection role. This remaining can open a new research aspect that focuses on changing actor’s capacity along the FT process as the extent to which new forms of governance can successfully solve ‘uncertainty’ – or social and administrative problems to force better FT.

Third, as I highlighted in this dissertation, ‘new forests’ have emerged, including ‘PES territories’ and ‘smallholder tree plantation territories’. Inside these territories, there are new rules, new regulations, new institutions and mechanisms that influence the ability of different actors to benefit. Following the Political Ecology approach, it is crucial to pay particular attention to who wins, who loses, what the impacts are for society and different components of the environment. It is the further concerns that I call for more research in the future.

Four, there is a local forest livelihood transition as I highlighted in the dissertation. The forest interventions have tended to intensify the production of resources as commodities, in terms of timber, NTFPs, or ecosystem services. The forest transition has been designed through forestland sparing activities and territorializing in the extensively used landscapes we see today. It is the reason why there is a local forest livelihood transition and the formulation of new forest people

as I highlighted in the thesis (Chapter #6). Within the livelihood transition, however, questions remain on changes in the structure of labor, within households or society (different classes, gender, or ages), and other inequality issues during a period of radical changes of forest landscape. It is the fourth component that I would love to go further in future research.

Last but not least, as I am taking a different approach that switches from quantitative to more qualitative in the FT studies. This new view allows me to identify new types of FTs, 'push and pull' mechanisms as well as 'uncertainties' that these new reveals. But how we can deal with these uncertainties to lead to better quality and sustainable FT? It is necessary to develop a model that can predict FT scenarios in the future but based on the input variables from the past and present.

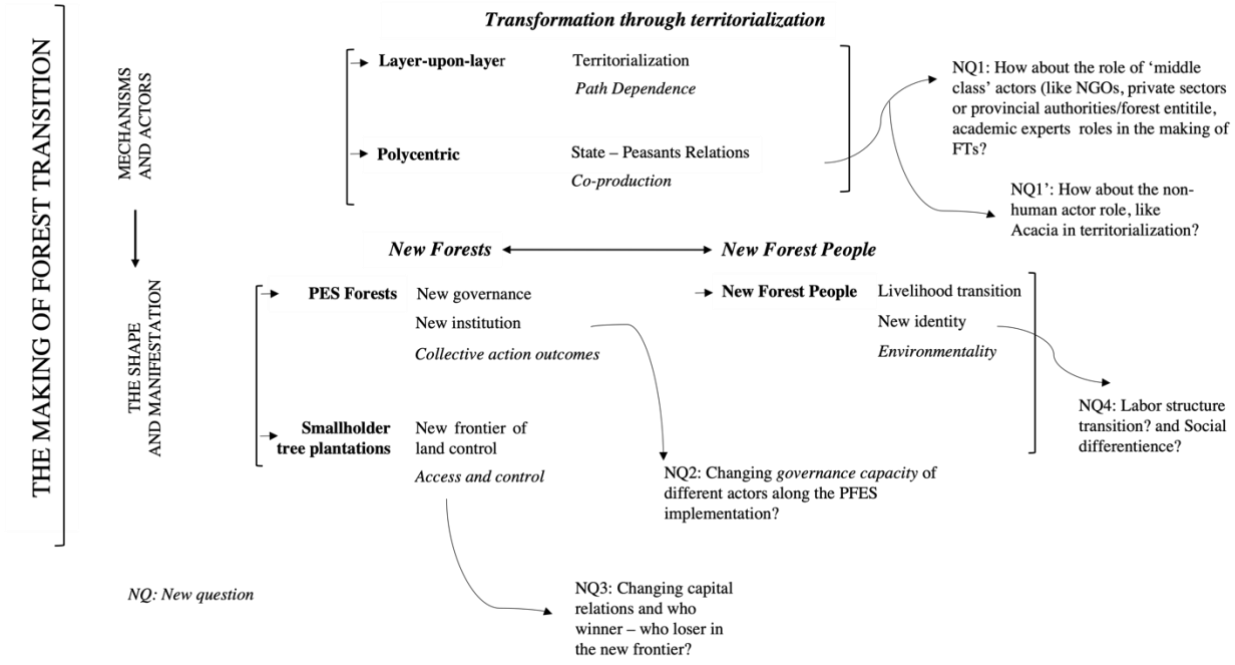

Figure 19 - Missing pieces and further research question

7.4. Policy Recommendations

Vietnam's Forests 2021-2030, toward 2050: Transforming from 'quantity' to 'quality' and 'sustainability'

Vietnam has been lauded as a successful example of a *forest transition* with its successful turnaround from net deforestation to reforestation since the 1990s. However, the current situation on the ground is far from the superficial smooth development of forest cover depicted in the government annual reports. Today, Vietnam's forests can be seen as a bifurcation between exotic plantations and protected yet threatened natural forests. On the ground, what we see is not a dream of re-growing tropical native forests, but rather the nightmare of overreliance on

introduced, fast-growing but low-diversity trees that have displaced native flora and fauna. The increase of forest cover, mainly by monoculture exotic species, such as acacias and eucalyptus from Australia, or even rubber, cannot hide the continuing degradation and deforestation of natural forests. The primary rich forest area of the country remains very small, accounting for just 22% of the total natural forest area. Though most of these areas belong to the protected area system, the remaining natural forest areas face the threat of conversion and encroachment for various socio-economic development and commercial plantation purposes.

In the context of global climate change and economic trends towards sustainability, the roles of forests are increasingly emphasized. Forests play an important role in ensuring ecological security for human life and economic development. Recognizing the importance of forests, Vietnam was one of the first countries to pledge forest landscape restoration efforts and is maintaining their efforts with an ambitious large-scale tree plantation campaign. In October and November of 2020, a relentless barrage of typhoons and tropical storms slammed into Vietnam, causing record flooding and countless landslides. The (former) Prime Minister Nguyen Xuan Phuc responded quickly by calling for 1 billion trees to be planted nationwide by 2025 with the hope that increased forest cover would help prevent future disasters. The program is now official government policy as part of the new Vietnam Forest Development Strategy 2021-2030, towards 2050 with a number of aims, including protecting ecosystems, improving scenery, responding to climate change, and aiding economic development. So, it seems the will to foster a new round of 'drastic forest transition', as both an urgent task and a long-term strategic task, has taken off. As a result, the forestry sector for the next 10 years and beyond is expected to develop rapidly but sustainably.

As part of the research for development (R4D) project, what I wish to do here is to bring research-based evidence from contemporary Vietnam and ask, what can we learn from what occurred during the 30 years of FT in Vietnam to do better in the next? By tracing the process from national policymaking to operational setting and implementations and exploring the reactions from local actors to these interventions over the last three decades, the framework of the dissertation allows me to make substantive recommendations to contribute to policy discussion for the future of Vietnam's forests. I argue that to reach the target of the rapid but sustainable forestry development in the next 10 years or further, Vietnam's new strategy requires a strategic, scientific, and sustainable investment as well as the collective action of multi-stakeholders through various partnership initiatives across scales. It is also the reason why I have selected the title, "Vietnam's forests 2021-2030, toward 2050: Transforming from 'quantity' to 'quality' and 'sustainability'".

Some parts of this section have already been published as different communication products in the form of a film, press interviews, and policy review (see Appendix #3, 4, and 5). The publications have highlighted some key findings from the research and provided recommendations and policy options along the process of developing a new forestry development strategy in Vietnam, from early 2020 until April 2021.

Putting forest transition in the context of green growth, sustainable development, and climate change mitigation

As the most important guideline for the forestry sector development, Vietnam's Forest Development Strategy (VFDS) must consider and put 'forest' in the context of changing politics and the country's socio-economic development. Many studies show that the turn-around from deforestation to reforestation of Vietnam's forests is due to the scarcity factor (the shortage model due to resource degradation) and the economic factor (the reform toward economic growth and modernization). The economic structural shift, thus, will most likely still be the decisive factor for forest transition in the future. The strategy must be situated into the broader context of contemporary Vietnam's development.

The forestry sector has been identified as a pillar of Vietnam's green growth strategy, associated with building a low-carbon economy towards sustainable development. For example, in 2020, Vietnam submitted its Nationally Determined Contribution (NDC), stating a national emission reduction target of 9% on its own, and a target of up to 27% with international support. The policy recognizes forests as a source of green capital, an important carbon sink, and ecological support for the whole economy. The NDC also emphasizes the important contribution made by the forestry sector and the need to prevent deforestation and degradation, particularly in the regions where most of the remaining natural forests are located and are also under increasing pressure, such as Central Vietnam and Thua Thien Hue province.

However, the forestry sector will not automatically become a mainstay in the green economy if it lacks connectivity with other economic sectors. Unfortunately, the forestry sector is currently still managed in a relatively isolated manner. It is often the least invested object or considered 'weak power' due to its low contributions to GDP, despite occupying a relatively large area (more than 14 million hectares, approximately 42% of forest cover). In contrast, the land resources for development for other purposes, especially infrastructure, urban development, or commercial agriculture, are exhausted. Forests thus become a 'fertile land bank' that other sectors are looking at. Forest conversion and encroachment for various purposes are inevitable.

At the same time, the development approach to make the forestry sector become an "*economic sector*" and to "*increase the contribution to GDP through timber-based industry*" is still dominant (MARD 2016, 2020). To fulfil the raw material demand for the timber industry, more land should be used for expanding forest tree plantations. The land hunger situation of one smallholder tree plantation in Central Vietnam is a prime example of this situation, as my research highlighted (see Chapter #5). In contrast, the greatest strengths of forests, which are the value of biodiversity and ecosystem service provision function for society, are not receiving worthy investment. Although there are some new programs that promise to bring potential finance source for forest protection, such as payment for forest environmental services (PES) and reduce emissions from deforestation and forest degradation (REDD+), lack of funding is still an issue across Vietnam. An unbalanced bifurcation between conservation vs. production, and natural forests vs. plantation forests, is what we see today in forests on the ground and also within the development strategy of forestry sector. How can conserving forests and biodiversity that need huge investment in both time and finance while the market demand for planted timber is very high?

If there is no reform, the forestry sector will still play the role of providing basic raw products or even just a 'land bank' for other economic sectors without being able to promote its own strengths. The bifurcation of forest transition will become more and more serious, and may even turn into a tension, not from outside but from within the more than 14 million hectares of current forests and forestland.

Based on the situation, I would recommend the forestry sector should do the following:

- Re-imagine the primary goal of the forestry sector in the future to sustainably develop as a specific economic-technical sector. This includes all activities associated with the production of goods and services related to forestry, along the value chain from management, protection, plantations, exploitation, processing, trade in forest products, and related services. It will also focus on restoring and conserving forest ecosystem services.
- The core approach of the forestry sector in the future should be investing in intensive cultivation and quality (instead of large-scale expanding forest area), attracting investment capital of the whole society, increasing added values, and reducing resource exploitations, associated with green growth.
- The path to sustainability of the forestry sector thus should involve increasing forest productivity with more efficient use of resources, improved value chains for commodities produced across the landscape, and functioning mechanisms that reward provision of

ecosystem services. The interventions should include new land-use planning and policies, strengthening capacities, and partnerships among actors to enable better conditions for comprehensive green growth strategies, from local to global and vice versa.

- The forest protection and conservation activities are still maintained by meagre state budgets and occasional international grants. With the current trend of economic development and the pursuit of green growth goals, investment in these activities will gradually have to be supplemented and diversified with many other domestic and international financial sources through appropriate financial mechanisms and institutional structures. Several new options for forest protection and conservation need to be studied and applied, such as: market-oriented initiatives, public-private partnership for promoting and mobilizing public resources, as well as enhancing environmental and social responsibility for businesses associated with Vietnam's forestry development goals.
- An interdisciplinary approach to systematic planning and management of the landscape that balances between conservation vs. production, and natural vs. plantation forests, is crucial. It needs to be used as the basic guideline for building the development paths and finding investment solutions for the forestry sector.
- The United Nations Development Agenda to 2030 focuses on achieving the 17 Sustainable Development Goals (SDGs). Most analysts suggest that forests and forestry play an important role in achieving at least 15 of these 17 goals. In Vietnam, there is a general perception that forests will play an important role; however, there are no specific analyses showing how forest protection and development will contribute to the specific SDGs. Forest cover, forest quality, forest definition, and the role of forests in maintaining ecosystem services and other functions all will affect sustainable development goals. Thus, it is necessary to have a comprehensive research program in related fields to these issues. Such a program must not only be led by individual researchers, research institutes, or development organization, but also be institutionalized in the government's annual evaluation and monitoring system.

Forest cover: What quantity and quality is appropriate?

Globally, forest cover is now about 31%, compared with 46% in pre-industrial times (FAO 2010). Depending on various conditions in a specific country, there is no such thing as a standard forest coverage should be. But in general, each country tends to set the goal for forest cover to be balance between maintaining environmental functions and the demand for economic, agriculture and other land use purposes.

The new VFD set a target of 42-43% of forest cover by 2050. However, it is not clear whether this target is just a simple addition along the current forest transition curve or if it has already analyzed carefully to achieve stability in relation to socio-economic development needs or to meet the requirements for mitigating impacts of natural disasters and climate changes or maintaining ecosystem services provision for society.

One of the most important aspects related to forest cover is forest definition. The definition of forests in the world is often political and serves for management purposes. The forest (tree) cover thus does not fully reflect the 'quality' of forests. An increase in forest cover does not mean an increase in quality and ecological function of forests. No one can confirm that the current nearly 42% of forest cover in Vietnam, of which the majority is poor quality natural forests and monoculture exotic tree plantations, is unlikely to be better 'quality' than the only 30% of forest cover with rich or restored natural forests.

Since the 1990s, Vietnam has taken 'quantity' of forest cover as a criterion to reflect 'quality' of forests and the effectiveness of forest protection and development efforts. From a purely technical indicator, the forest cover has become a 'political' one that localities and the forestry sector at national level aim to increase every year. Attempts to increase forest cover in short periods of time with financial limitation, the large-scale reforestations with fast-growing trees were the top selection. Consequently, Vietnam has seemingly been able to shortcut the forest transition. In just a few decades, the initial reforestation and afforestation efforts have turned into the boom of commercial forestry tree plantations. Even though the value of commercial tree plantations for local livelihoods and the economy is undeniable, these new planted areas can hardly be called forests and may even take away the opportunity for natural re-growth forests. These monoculture plantations are also very poor in their ability to hold or regulate water flow or stabilize soil. In particular, these areas are not allowed to stand or grow for a long time due to its economic purpose and other silviculture technical requirements. This becomes especially dangerous when planted forests grow strongly in the central coastal region, with steep, fragmented terrain and large volume of annual rainfall. The changes will also entail drastic transformations in the quality of forests while completely changing ecological-social factors around forests. The initial state-led, large-scale reforestation programs, accompanied by the rapid development of the global timber market, have created a solid foundation for new economic transactions within the forestry sector when tree plantations turn into a new deforestation driver on the remaining natural forests.

For the above reasons, which are findings from my research, I suggest that Vietnam's forests have passed the period when it was necessary to sharply increase forest cover in 'quantity'. The new priority goals should be to increase quality towards sustainability as follow:

- Create a sufficiently deep and extensive study on a specific and context-appropriate forest definition and forest cover. Within the definition, the proportion of natural forests vs. plantation forests also needs to be identified.
- Below the national level, it is also crucial to develop specific forest categories and forest cover targets or forest development policies that are suitable to the ecological characteristics of different regions.
- Focus not only on the 'quantity' but also the 'quality' aspect of forests and forest cover, especially those related to the ecological values, functions, and culture of forests as the foundation for forest protection, development, and governance toward sustainability.

Transforming from exploitation to investment and enhancing the values of forest service commodities in natural forests

In parallel with increasing forest area through reforestation and afforestation, Vietnam has been pushing to switch from exploiting natural forest products to forest protection and enhancing the values of forest products and services by new added values. Since 2008, through the pilot implementation of the initiatives REDD+ and PES, Vietnam has embedded this idea into its national policy framework. The country has integrated PES to attract new financial sources for forest protection and development. After 10 years of implementation, the PES revenue has been used to manage and protect over 5 million hectares of natural forests (equivalent to nearly half of the country's natural forests). Similarly, it is estimated that Vietnam's REDD+ carbon revenue in the coming years can reach US$70-80 million/year, providing very important financial support for forest protection and development.

However, the payment for PES forest protection nationwide, which averages around VND265,000/hectare/year (US$11.5/hectare/year) and peaks at VND600,000-800,000 hectare/year (US$26-34/hectare/year), is still a small income source when compared to the revenue that local households can get for converting forests to other land uses. For example, each hectare of coffee in Gia Lai can collect VND150-200 million/hectare (US$6400-8600/hectare), or the acacia plantation in Thua Thien Hue province can bring VND30-40 million/hectare/3 years (US$1200-1700/hectare/3years). It is a challenge to motivate local households to participate voluntarily or consider 'forest protection' as a kind of livelihood, if the forest protection incentives

are not closely integrated with other livelihood development programs in Uplands across the country.

So, the transformation from ‘exploitation’ forestry to ‘conservation’ forestry, combined with ‘sustainable harvest’, should form part of the road ahead for Vietnam to harmonize binary development goals inside forestry sectors. The solutions should be:

- Integrating a new perception of the value chain of forestry economy and strengthening the role of financial initiatives, such as PES, into a new strategy.
- Developing and investing on the allocated forestland and advancing community-based forest management.
- Encouraging the private sector’s participation and investment in natural forests.

Rethinking the role of smallholder tree plantations

In many countries worldwide, afforestation and tree planting activities are often undertaken by forestry companies or by large enterprises investing in raw materials. In contrast, Vietnam is one of the few countries where afforestation and timber plantation are mainly done by smallholders. This practice stems from the land allocation and forest allocation policy that Vietnam initiated in the mid-1990s with the goal of "making every land, every forest, every hill owned". Since then, nearly 1.4 million households in Vietnam have been allocated 4.5 million hectares of forest, an average of 1-3 hectares/household. This devolution policy has greatly motivated households to invest in afforestation, thereby contributing to increased forest cover across the country. Smallholder tree plantations, accounting for nearly two-thirds of all production plantations of the country, have played an important part in the net increase in Vietnam's forest areas. So, it cannot be denied that millions of smallholders have formed the foundation for the development of timber-related industries, such as paper mills, wood chips, and furniture.

However, these areas are quite fragmented, as an estimated 80% of those smallholders have an average of 1-3 hectares of the plantation, in two or three scattered plots and no more than 30 hectares. Despite the advantage of requiring low investment and quick turnover, the production scale is small and only focuses on fast-growing species such as acacia, in a short rotation of 3-5 years. It is the reason why although Vietnam's plantation forest area is quite large, accounting for 45% of the production forest areas, the quality of timber is low. Domestic planted timber meets the quality requirements for paper production, wood materials, and wood chips, but cannot meet for hardwood and high-quality timber. At the same time, it is impossible to meet the demand for hardwood and high-quality timber. It leads to a paradox that though Vietnam belongs to the group

of the largest furniture exporting countries, most of the timber materials are still imported from abroad.

The situation also posed many barriers and challenges related to the legality of imported timber, the efficiency of forestland use, or the ability to increase the added value of plantation forests. Recently, although the Vietnamese government has facilitated a long-rotation forest plantation policy, so far, the results have been very limited because of the lack of investment capacity in land resources, secured land rights, financial and technical capacity, and poor access to the market. These also contribute to creating a barrier for smallholders to participate or meet requirements of international standards for sustainable forest management under popular schemes such as Forest Sustainable Certificate (FSC) or the Program for the Endorsement of Forest Certification (PEFC), which were designed exclusively for large-scale plantations.

In addition, due to the fuzzy and contested land tenure, it is very difficult for Vietnam to verify the legitimacy of material timber sources. 'You said illegal, I said legitimate' – is the big issue for Vietnam in the international negotiations for sustainable timber trade agreements, such as the Voluntary Partnership Agreements in the Forest Law Enforcement, Governance, and Trade (VPA/FLEGT). It is thus difficult for smallholders and also Vietnam's timber industries to get into in the large and highly standarded markets of Europe or the US.

In the new VFDS in 2021-2030, toward 2050, the government set a high expectation on the economic contribution from the smallholder plantations, both from monoculture plantations and agroforestry. But what I presented above reveals the big challenges in achieving the government's target while smallholders in the group still struggle to access the market. Therefore, I recommend the forestry sector should do the following:

- Pay attention to the legality and access to land resources as well as the solutions for sustainable land-use planning and management for smallholder tree plantations.
- Improve smallholders' knowledge/skills to establish and manage tree plantation farms with technically advanced management modes to improve the success, productivity, and profitability of the smallholder plantations.
- Improve and maintain the link among research, education, and extension system since this linkage has not been well established in the country.
- As part of this, research activities related to constraints and enabling conditions for the success of smallholder tree planting should be encouraged and supported. The system of local nurseries and market access information also should be produced.

- Pay more attention to the inadequacy of the current credit system since financial limitations were also revealed as a major barrier for smallholders to start tree plantations or keep the rotations longer.
- Promote industrial forestry standards toward better quality and sustainability and ensure to tackle fully environmental and social safeguards.

Summing up

Although the forest cover m is steadily increasing every year, it cannot be denied the fact that Vietnam's forests are facing the situation of "uncertainty". The expansion of commercial forest plantations to increase forest cover is somewhat controversial with protection and conservation and the objectives to reduce deforestation. The active participation of local villagers in commercial tree plantations can provide economic incentives and contribute to poverty alleviation while at the same time revealing the challenges and risks for modernity and sustainable development. The dissertation, instead of looking at 'outsider' factors on forests, provides a critical look into the 30 years of drastic forest development in Vietnam. It reveals that underneath the superficial smooth trajectory of forest cover changes, various parallel transition processes have been taking place. All connect, blend, and articulate each other to shape the real 'nature' of forest change dynamics in practice. As a result, as I pointed out, there is a bifurcation in the policy objectives and forests in practice: natural vs. planted, conservation vs. protection. They have seemingly converged to set the 'success' of the country's forest transition over the last three decades. But they have been recently starting diverging. This fact shows that the deliberated forest transition is far less certain or predictable in practice.

This piece seeks to highlight the importance of dynamics of political and social relations around forests in analyzing the making of forest transition over the last three decades, and to contribute to a fuller picture of Vietnamese's contemporary forest change dynamics. It poses the question of winner-loser and whither forest transition in the future? With my research, I seek to raise discussion about embracing these uncertainties through new strategies and interventions with more strategic intent, quality, and sustainability. The issue becomes more crucial and needs to be taken more seriously in the future, especially in the context of that the Vietnamese government has already signed a number of international commitments to protect natural forests toward a green growth economy and combat climate change.

Appendixes

Appendix 1

The article: *Hybrid outcomes of Payments for Ecosystem Services Policies in Vietnam: Between Theory and Practice*

https://onlinelibrary.wiley.com/doi/10.1111/dech.12548

Appendix 2

The article: *Vietnam's forest cover changes 2005-2016: Veering from transition to (yet more) transaction?*

https://doi.org/10.1016/j.worlddev.2020.105051

Appendix 3

A Policy Review: Vietnam's Forestry 2021-2030: Transition from quantity to quality

Vietnam is the first country in Southeast Asia to undergo a process of 'forest transition' when it has successfully shifted from a state of high deforestation to large-scale afforestation and reforestation. The forests are on the verge of recovery and development, with reported coverage increasing steadily annually. However, coverage is a necessary but not sufficient condition. Many recent studies and reviews reveal that the quantity indicators are not enough to reflect the changing nature of Vietnam's forests, especially in terms of biodiversity, stability, and sustainability. On that basis, the Policy Newsletter focuses on discussing and analyzing in-depth on seven topics: (i) Forests In Vietnam: Quantity or Quality?; (ii) How much forest cover is enough?; (iii) Tree plantations or regeneration of natural forests: Global experiences and some thoughts on forest restoration programs in Vietnam; (iv) The role of local communities in reforestation and lesson for future large-scale restoration programs in Vietnam; (v) Situation of forestland use and management by local people; (vi) Community Forestland Allocation Program: Opportunities and challenges and (vii) Stringent control over the conversion of natural forests.

I contributed one article and played as the main editor for this special policy newsletter with experts and researchers. The outline was designed based on my Ph.D. research and the FTViet project activities. The objective is to use reliable research-based evidence to contribute to completing the new draft Vietnam Forestry Development Strategy for 2021-2030, vision towards

2050. As a result, 1500 hard copies have been delivered to high-ranking policymakers, forest management agencies, and networks of NGOs and research institutions across Vietnam. Over 5000 online reaches also have been recorded.

Source: https://nature.org.vn/vn/2020/12/ban-tin-chinh-sach-so-31-lam-nghiep-viet-nam/ (Vietnamese only)

Appendix 4

A Short Film: **Shaping a sustainable future in the forests of the A Luoi Valley**

The evergreen forests of A Luoi Valley of Thua Thien Hue province are essential for a balanced climate, and they help prevent erosion and floods in the lowland areas. The region, however, bore the scars of war and suffered the tactical use of herbicides. Today it also faces many challenges of deforestation, reforestation, and struggles for resources between diverse stakeholder groups. Simultaneously, commercial acacia and rubber tree plantation have rapidly changed landscapes and replaced rural livelihoods. The film set out to analyze the specific challenges local communities and forest management officials have to face and the opportunities to promote multi-stakeholder dialogues to find a sustainable future in this border region of Central Vietnam.

The film has been selected and published on the Knowledge for the Development platform (k4d.ch), as part of the Swiss Program for Research on Global Issues for Development (r4d program).

https://www.k4d.ch/shaping-a-sustainable-future-in-the-forests-of-the-a-luoi-valley/

Appendix 5

Interviews for Mongabay articles

1. Questions remain as Vietnam reaches major REDD+ milestone by Michael Tatarski on 1 April 2019.

Source : https://news.mongabay.com/2019/04/questions-remain-as-vietnam-reaches-major-redd-milestone/

2. 'Drastic forest development': Vietnam to plant 1 billion trees – but how? by Michael Tatarski on 20 May 2021.

Source : https://news.mongabay.com/2021/05/drastic-forest-development-vietnam-to-plant-1-billion-trees-but-how/

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