

# Ethnic minority livelihoods contesting state visions of 'ideal farmers' in Vietnam's northern borderlands

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## Abstract

Since the 1990s, several Vietnamese state policies have focused on whole-heartedly integrating upland ethnic minority farmers into the market economy. These policies revolve around interventions related to natural resource use, agricultural intensification, and cash-cropping, in a quest to produce 'ideal farmers.' Simultaneously, the growing frequency of extreme weather extremes has been impacting upland livelihoods in important ways. Consequently, farmers must now navigate an increasingly complex socio-political and natural environment when making livelihood decisions. This study focuses on a mountainous district in the Sino-Vietnamese borderlands. Through in-depth qualitative fieldwork with ethnic minority semi-subsistence farmers and local officials, we delve into the ways in which farmers respond to the unpredictable interplay of state interventions and extreme weather events. Rooted in contemporary political ecology debates, we adopt a multi-scalar approach while drawing on actor-oriented livelihood conceptualizations. Our findings show that the Vietnamese state has failed to convince upland farmers to fully commit to state-endorsed cash-cropping schemes. Yet, farmers do not necessarily reject such opportunities outright. Rather, they navigate and rework state-supported opportunities, all while remaining acutely attuned to local physical environment limits, important social networks, and cultural norms and expectations.

**Keywords:** Vietnam, rural livelihoods, ethnic minorities, black cardamom, environmental rule, agrarian transition

## Résumé

Depuis les années 1990, un certain nombre de politiques d'État vietnamiennes se sont concentrées sur l'intégration sincère des agriculteurs des minorités ethniques des régions montagneuses dans l'économie de marché. Ces politiques tournent autour d'interventions liées à l'utilisation des ressources naturelles, à l'intensification agricole et à la culture de plantes lucratives, dans le but de produire des « agriculteurs idéaux ». Parallèlement, l'augmentation de la fréquence des phénomènes climatiques extrêmes a eu un impact important sur les moyens de subsistance des régions montagneuses. Par conséquent, les agriculteurs doivent désormais naviguer dans un environnement socio-politique et naturel de plus en plus complexe lorsqu'ils prennent des décisions sur leurs moyens de subsistance. Cette étude se concentre sur un district montagneux situé dans les régions frontalières sino-vietnamiennes. À travers des travaux de terrain qualitatifs approfondis avec des agriculteurs semi-subsistants issus de minorités ethniques et des fonctionnaires locaux, nous explorons les façons dont les agriculteurs réagissent à l'interaction imprévisible entre les interventions de l'État et les

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phénomènes climatiques extrêmes. Enracinés dans les débats contemporains sur l'écologie politique, nous adoptons une approche multi-échelle tout en nous appuyant sur des conceptions de moyens de subsistance orientées vers les acteurs. Nos résultats révèlent que l'État vietnamien n'a pas réussi à convaincre les agriculteurs des régions montagneuses de s'engager pleinement dans des schémas de culture lucrative approuvés par l'État. Cependant, les agriculteurs ne rejettent pas nécessairement ces opportunités de manière catégorique. Au contraire, ils naviguent et adaptent les opportunités soutenues par l'État, tout en restant très attentifs aux limites de l'environnement physique local, aux réseaux sociaux importants, et aux normes culturelles et aux attentes.

**Mots-clés:** Vietnam, moyens de subsistance ruraux, minorités ethniques, cardamome noire, règles environnementales, transition agraire

## Resumen

Desde la década de 1990, una serie de políticas estatales vietnamitas se han centrado en integrar de todo corazón a los agricultores de minorías étnicas de las tierras altas en la economía de mercado. Estas políticas giran en torno a intervenciones relacionadas con el uso de recursos naturales, la intensificación agrícola y los cultivos comerciales, en busca de producir 'agricultores ideales.' Simultáneamente, la creciente frecuencia de fenómenos climáticos extremos ha estado impactando de manera importante en los medios de subsistencia de las tierras altas. En consecuencia, los agricultores ahora deben navegar en un entorno socio-político y natural cada vez más complejo al tomar decisiones sobre sus medios de vida. Este estudio se centra en un distrito montañoso en la frontera sino-vietnamita. A través de un trabajo de campo cualitativo en profundidad con agricultores de minorías étnicas semisubsistenciales y funcionarios locales, profundizamos en las formas en que los agricultores responden a la impredecible interacción de las intervenciones estatales y los fenómenos climáticos extremos. Basados en los debates contemporáneos de ecología política, adoptamos un enfoque multi-escalar al tiempo que nos basamos en conceptualizaciones de medios de vida orientadas hacia los actores. Nuestros hallazgos revelan que el estado vietnamita no ha logrado convencer a los agricultores de las tierras altas para que se comprometan completamente con los esquemas de cultivos comerciales respaldados por el estado. Sin embargo, los agricultores no necesariamente rechazan estas oportunidades de manera absoluta. En cambio, navegan y adaptan las oportunidades respaldadas por el estado, al mismo tiempo que permanecen extremadamente atentos a los límites del entorno físico local, las redes sociales importantes y las normas y expectativas culturales.

**Palabras clave:** Vietnam, medios de vida rurales, minorías étnicas, cardamomo negro, normatividad ambiental, transición agraria

## 1. Introduction

The Vietnamese government is working persistently to integrate its northern borderlands and their residents into the state's ideal vision for its agricultural landscapes. This endeavor includes persuading upland ethnic minority farmers to intensify their agriculture, engage fully with cash cropping, adopt farm mechanization, and increase the surplus of farm produce available for sale and taxation (McElwee, 2009; Scott, 2009; Turner *et al.* 2015). Since the 1990s, Vietnam's northern uplands have been subjected to a series of agricultural development policies focusing on agricultural intensification to promote food security and cash crops (Bonnin and Turner, 2012; Kyeyune and Turner, 2016). Such policies have championed the benefits of state-sponsored hybrid rice and maize, bringing with them a new dependence on chemical fertilizers and pesticides. Additionally, they have encouraged the mono-cropping of rubber, eucalyptus, cinnamon, and coffee (McElwee, 2016; Derks *et al.* 2020). Many of these policies are presented as development interventions aiming to improve socio-economic circumstances and food security, yet they often fail to account for local, culturally appropriate livelihoods (McElwee, 2004a; Nguyen and Baulch, 2007; Hoang Thanh *et al.*, 2018).

Such policies and interventions are being introduced within upland ethnic minority communities where semi-subsistence livelihoods have been the pattern of production for generations (Turner, 2010; Michaud & Turner, 2016). Traditional staple crops for these households have predominantly consisted of landrace varieties of rice, corn, and cassava. Moreover, their livelihood strategies have included livestock rearing of water buffalo, goats, pigs, and chickens, home gardens cultivating vegetables, herbs, and fruit, as well as the collection non-

timber forest products (NTFPs), such as black cardamom, honey, mushrooms, insects, and wild game.<sup>2</sup> Small-scale trade at local periodic markets was traditionally – and for many still is – part of a household's livelihood portfolio. This involves the sale of various commodities, including livestock, NTFPs, home-distilled alcohol, and/or fruit and vegetables (Turner *et al.* 2015; interviews).

Given the rapidly changing agrarian landscape in these borderlands, our inquiry delves into the mechanisms through which the Vietnamese state endeavors to transform semi-subsistence cultivators into 'ideal farmers', while encouraging their full integration into an agrarian transition. We focus on Bát Xát, a rural district situated in Lào Cai Province and positioned directly on the border with China. Within this context, we examine cash-cropping initiatives that have been introduced by the state and how minority farmers have navigated these. Furthermore, recognizing that these uplands have been experiencing a rising number of extreme weather events, we also analyze how these are impacting farmer livelihood decision-making. These extreme weather events, which have increased in frequency dramatically since 2008, include extended periods of rain, drought, and cold-weather precipitation, comprising snow, hail, and freezing rain. The consequences have been severe, wreaking havoc on crops and livestock (Delisle & Turner 2016; Rousseau *et al.*, 2019).

To date, most research on changing ethnic minority livelihoods in Lào Cai Province has centered on Sa Pa District. This district has witnessed a more intense integration into cash commodity circuits compared to Bát Xát, particularly due to a more developed road network and easier access to the lowlands (Jadin *et al.* 2013; Garber & Turner, 2023). Additionally, small-scale tourism opportunities have been possible for ethnic minority communities in Sa Pa District for a longer duration than in Bát Xát District. This difference arises in part due to Sa Pa's historical role as a colonial hill resort, and Bát Xát's relative inaccessibility and security concerns given its proximity to the Vietnam-China border. Given these factors, we wanted to select a study location where these external variables and possible mediating factors were less pronounced. This allows us to gain a clearer understanding of how upland ethnic minority farmers interact with state policies that are relentlessly promoting agrarian change.

Next, we outline our conceptual framework, drawing together selected debates within political ecology. We argue that a multi-scalar approach is essential for comprehending the intricate policy dynamics at play in these uplands. We also incorporate core concepts from livelihood studies and actor-oriented approaches. This framework allows us to explore how farmers respond to both state-driven agrarian transition interventions in these uplands, and the ramifications of severe weather changes. We then introduce our case study locale, Bát Xát District, Lào Cai Province, home to Yao (Dao), Hmong, and Hani ethnic minority farmers. Important agrarian transitions in these uplands have been accelerated by the introduction and promotion of hybrid seeds that require farmers to generate cash for seeds and associated inputs. We analyze the livelihood pathways farmers have adopted to secure this cash, noting the degree to which they have embraced (or not) state-promoted cash-cropping options. We detail how the cultivation and trade of black cardamom (*Lanxangia tsaoko*, formerly known as *Amomum tsaoko*) has emerged spontaneously (without government assistance) as a key strategy for generating cash since the 1990s. In contrast, the state has introduced several specific cash-cropping initiatives in its pursuit of creating 'ideal farmers.' However, we find that a number of these initiatives have failed, causing considerable livelihood angst for upland farmers. To complicate matters further, extreme weather events have devastated black cardamom harvests. We thus investigate the strategies employed by farmers across the District to navigate not only these weather-related difficulties, but also an array of unforeseen challenges stemming from state initiatives.

Through illuminating the intricate interplays of state messaging, environmental conditions, and specific on-ground policies, our intention is to enhance understandings of the intricate challenges confronting ethnic minority farmers in northern Vietnam and their responses. Furthermore, as neighboring socialist states China and Laos also undergo state-sponsored agrarian transformations (Cole & Rigg, 2019; Zinda & He, 2019), our study emphasizes the need for comparable comprehensive fieldwork and analyses of ethnic minority responses to the multifaceted forces molding livelihoods in those countries. We hope our conceptual framework can aid in facilitating such efforts.

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<sup>2</sup> We consider NTFPs as biologic materials (excluding timber) that are collected for human use from forest ecosystems (de Beer & Mcdermott, 1989).

## 2. Methods

This study is based on five months of fieldwork completed between 2018 and summer 2023 by the first author in Bát Xát District, Lào Cai Province, Vietnam. He completed semi-structured interviews, oral histories, and group interviews with ethnic minority farmers in Bát Xát District, and semi-structured interviews with state officials at relevant national, provincial, district, and commune offices. These insights are backed by 25 years of research in the Province by the second author, most recently in summer 2023.

The primary sources of fieldwork data for this article (and from which we draw proportions in our analysis) are the semi-structured interviews conducted with farmers in 2018. These were completed with 139 farmers including 73 Yao (Dao) farmers (38 of whom were women), 50 Hmong (9 women), and 16 Hani (7 women). The ethnicity of participating farmers reflects the different proportions of these ethnic minority groups in Bát Xát District. From previous scoping research, as well as land-use land-cover change studies conducted here by our collaborators and former students, we already knew that many District farmers had turned to black cardamom cultivation to gain cash for hybrid seeds (Trincsi *et al.*, 2014; Turner & Pham, 2015; Turner *et al.*, 2015). We elected to focus on such farmers to maintain a degree of baseline livelihood similarity across interviewees. Additionally, we were aware of the impacts of extreme weather events on cardamom cultivators in neighboring districts. We thus wanted to determine if and how Bát Xát cardamom cultivators were affected, given the importance of this crop for cash income (Delisle & Turner, 2016; Rousseau *et al.*, 2019). Interviews were completed with farmers in all 21 cardamom-cultivating communes in Bát Xát District (out of 23 total communes).<sup>3</sup> Interviewees were chosen as a stratified sample across ethnic groups, local agro-ecological conditions, and different distances from road networks, market hubs, and the Chinese border.

Interview themes focused on changes over the past three generations regarding livelihood components, forest cover, extreme weather events, state policy interventions, and comparisons of trends with neighboring farmers. Semi-structured interviews were also completed with 21 government officials, all of whom were Kinh (lowland Vietnamese majority). In addition to the semi-structured interviews with farmers and officials, data from oral histories, group interviews, and overt participant observation are drawn on here to corroborate those results and provide contextual information.

## 3. The creation of 'ideal farmers': a multi-scalar, conceptual framing

Conceptually and empirically, we wish to contribute to ongoing debates within political ecology regarding scale, environmental rule, and 'ideal farmers.' We also draw upon the sustainable livelihoods literature, focusing on individual agency and the complex processes and structures that impact rural semi-subsistence livelihoods. In addition, we incorporate an actor-oriented approach. Numerous authors have critiqued political ecology for focusing too much on politics, at the expense of recognizing individual actors' agency (Ribot & Peluso, 2003; Ahlborg & Nightingale, 2018; Svarstad *et al.*, 2018; Sultana, 2020). By integrating these conceptual approaches, we want to highlight the ways by which broader processes (e.g., laws, policies, institutions) and structures (e.g., government, private sector) implicate individual actors, while also underscoring how these individual actors respond, often leading to quite different livelihood outcomes (DfID, 1999; Wisner, 2015; Carr, 2015; S. Turner, 2017; Svarstad *et al.*, 2018).

Moreover, a growing number of political ecology scholars have emphasized that different actors experience political, economic, and environmental change at different scales (Neumann, 2009; Svarstad *et al.*, 2018; Pasgaard *et al.*, 2022). In Vietnam, the politics of scale are closely tied to a rigid hierarchical classification system of administrative tiers, with officials at each tier holding different degrees of power to implement and police (and some would add, corrupt) state policies. On the ground, this system generates a confusing, multi-scalar web of decrees and expectations for rural residents. Our goal is to contribute to the political ecology literature by highlighting the importance of scale. We achieve this by analyzing the impacts of this complex web and how it elicits responses at multiple scales across an upland province, rather than treating farmers and

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<sup>3</sup> In Vietnam, rural provinces consist of multiple districts, each containing a number of smaller communes, while urban areas are categorised differently. Of the two communes in Bát Xát District where cardamom was not cultivated, one was the urban area of Bát Xát Town (the district capital), and the other had no cardamom plots (confirmed by farmers and state officials).

hamlets as isolated subjects and sites (Bebbington & Batterbury, 2001; Rocheleau, 2008; Carr, 2015; M. Turner, 2017).<sup>4</sup>

Relatedly, one of the many complex ways by which rural farmers and governments interact in the Global South is through state prescriptions of specific land uses across state territory. These policies often compel land stewards and other actors to implement state-preferred visions for particular landscapes (Scott, 2009; Fold & Hirsch, 2009; McElwee, 2016), a prominent phenomenon in Asia's borderlands (Sturgeon, 2005; Peluso & Lund, 2011; Li, 2014). These official visions may be implemented solely by the government, or with support from international non-governmental organizations, bilateral aid, and/or corporate entities. In all these scenarios, a dominant narrative is required to justify such transformations of land uses or livelihood strategies (Li, 2007; McElwee, 2016; Vandergeest & Roth, 2016).

Such dominant narratives may be actualized via policies and programs promoting environmental and agricultural ideals. Focusing on these dynamics in Vietnam, McElwee (2016: 5) coined the term 'environmental rule.' This "occurs when states, organizations, or individuals use environmental or ecological reasons as justification for what is really a concern with social planning, and thereby intervene in such disparate areas as land ownership, population settlement, labor availability or markets." McElwee (2016) argues that this state-imposed vision of protecting or improving the environment is frequently a façade for creating 'ideal' societies and subjects (see also Agrawal, 2005; Rutherford, 2007).<sup>5</sup> The state thus imposes an ideal projection of a particular landscape on its subjects, often for reasons that are distant from concerns of ecological sustainability (Peluso & Vandergeest, 2001; Scott, 1998).

Similar to environmental rule, state discourses of appropriate rural agricultural 'development' in the Global South often aim to modernize, intensify, and commoditize rural smallholder farmers to create "ideal agricultural subjects" (Pasgaard *et al.*, 2022: 103). Evolving from Agrawal's (2005) work on environmentality, Pasgaard *et al.* (2022: 103) define "ideal agricultural subjects" as individuals who are adequately positioned (or coerced) to successfully employ agricultural development ideals propagated by the state. Such 'ideal' livelihood strategies might include the intensification of staple crop production for domestic consumption and/or export (Flachs & Richards, 2018; Taylor & Bhasme, 2019), cash-crop production (Ahmed *et al.*, 2022; Rogers *et al.*, 2022; Turner *et al.*, 2022), or agricultural production systems that are "less ecologically harmful" (Hathaway, 2010: 446; McElwee, 2016). We draw on this literature to consider how the Vietnamese state is attempting to create what we term 'ideal farmers' in these remote borderlands.

While examining these policies with a critical lens, we also delve into the local responses to such governance attempts. Political ecologists have continually sought to challenge dominant environmental narratives that accuse rural inhabitants of causing environmental harm or brand them as 'unproductive' because they are 'uneducated', 'poor', and 'lazy' (Forsyth & Walker, 2017; Law, 2022). Employing a livelihoods approach can aid researchers in gaining a deeper understanding of individual livelihood responses and strategies. This approach recognizes the intricate interplay of formal organizations, social institutions, social relations, and cultural norms, which influence livelihood options and access to resources at multiple scales (Rocheleau and Edmunds, 1997; M. Turner, 2017; S. Turner, 2017).

Social relations and cultural norms (dis)enable access to natural resources. Therefore, understanding the agency (or lack thereof) that individual actors have, and how these are rooted in societal norms, is key to understanding the possibilities of sustainable livelihood approaches (Forsyth, 2003; Ribot & Peluso, 2003). As such, we want to integrate our understandings of transforming structures and processes with an actor-oriented approach to bring a more nuanced understanding of agency. Briefly, the actor-oriented approach emerged in response to large-scale economic determinism, with actor-oriented authors arguing that transformations occur through dynamic, iterative relationships of external and internalized factors (Korovkin, 1997; Escobar, 2001).

In sum, in response to calls for more attention to be paid to individual agency and multi-scalar analyses within the field of political ecology, we delve further into debates surrounding attempts to create 'ideal

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<sup>4</sup> For more specific debates on the conceptualisation of scale within political ecology see, among others, Neumann (2009); M. Turner (2017).

<sup>5</sup> There are clear connections here with Foucault's (1991) broader 'governmentality' notion, which has been outlined elsewhere (Vandergeest & Peluso, 1995; Scott, 1998, 2009; Peluso & Vandergeest, 2001).

agricultural subjects' or, what we term 'ideal farmers' in our case study region. By incorporating concepts from livelihood studies and employing an actor-oriented approach, our framework offers a roadmap for examining the transforming structures and processes operating at different scales within Vietnam's northern uplands. We scrutinize how these dynamics intersect or clash with the livelihood goals of individual ethnic minorities. Through our study of black cardamom cultivators in Bát Xát District, Lào Cai Province, we uncover how these ethnic minority farmers navigate seemingly relentless environmental and agricultural development policies and interventions – designed and implemented at different scales – that are now limiting their most profitable livelihood strategy. Rather than just documenting farmer responses, our conceptual framework enables us to investigate *why* and *how* farmers make specific livelihood decisions in the face of a multitude of interventions and increasing extreme weather events.

#### 4. Context: Upland state interventions and ethnic minority livelihoods

Following reunification in 1975, Vietnamese ethnologists perceived ethnic minorities as needing economic development and education, while Kinh, the lowland ethnic majority, remained the 'enlightened' majority (Michaud, 2013). This led to a socialist mission of developing 'lazy' and 'uncivilized' ethnic minorities, whom the state arbitrarily categorized into 53 'minority nationalities' (McElwee, 2004a; Michaud, 2013).<sup>6</sup> These groups were placed within an evolutionary development trajectory, with ethnic minorities in upland areas often regarded as the 'least evolved' and thus in need of the greatest intervention (Koh, 2002).

Situated directly on the Sino-Vietnamese border, our mountainous case study site of Bát Xát District covers 1,057 km<sup>2</sup> (Lào Cai Province People's Committee, 2017). As of 2019, 82,733 people resided in the District, including (in descending order of population) Hmong (31%), Yao (26%), Kinh (the ethnic majority, 18%), Giáy (17%), Hani (6%), and 'other' (2%) (SRV, 2019). This high proportion of ethnic minorities is reflective of the situation for Lào Cai Province as a whole, and of other northern upland provinces. This ethnic composition, as well as the fact that these upland provinces have been officially designated as 'poor',<sup>7</sup> mean that the northern upland region has been a focus of numerous state policies attempting to integrate upland ethnic minorities into the nation state through market integration, natural resource use, and development policies (Turner *et al.*, 2015; McElwee, 2016).<sup>8</sup>

One of the main state programs in this region has focused on agricultural intensification. Hybrid varieties of corn and paddy/wet rice, along with chemical agricultural inputs (e.g., fertilizer, pesticides, and herbicides) have been strongly encouraged via agricultural extension officials promoting food security and potential surpluses for sale, while hoping to stimulate entrepreneurship (Turner, 2022).<sup>9</sup> Originally, in the late 1990s, these inputs were free or subsidized, but over time the government removed many of these subsidies, resulting in a substantial demand for cash unseen before. In response, many Yao, Hmong, and Hani farmers in the northern borderlands turned to the intensification of black cardamom cultivation and trade where their natural capital allowed. However, this was just one of the many state interventions to follow, necessitating farmers to increase their cash income.

The government's 2009 "New Countryside Program" (Decision No. 491/QĐ-TTg), aims (among other objectives) to improve local infrastructure and social services in rural Vietnam. Before this program, many

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<sup>6</sup> The names given to different ethnic minority groups, as well as the criteria determining who was considered a member of each group, were frequently related to aspects of material culture, physical appearance, and state ideology (Michaud, 2009).

<sup>7</sup> Upland areas and ethnic minorities in the northern Vietnamese borderlands have been designated (often using highly quantitative approaches) as the poorest areas for the past three decades (World Bank, 2022).

<sup>8</sup> For example, Program 143 (Hunger Eradication and Poverty Reduction and Job Creation Program) and Program 135 (Program for Socio-economic Development of Extremely Difficult Communes for Ethnic Minorities and Mountainous Areas) aimed to integrate households into the market through infrastructure development, agricultural extension, credit access, vocational programs, and sedentarization (Nguyen & Baulch, 1997).

<sup>9</sup> Rice remains the preferred crop for human consumption in Bát Xát District given the climate and soils that allow for terraced wet rice cultivation, with hybrid varieties of rice and corn becoming increasingly common (interviews, 2018). However, many farmers still cultivate both wet rice terraces and swidden plots of landrace rice, and swiddens of landrace corn for specific purposes, including a strong preference for their taste (interviews, 2018; see also Bonnin & Turner, 2011, 2012).

farmers in Bát Xát District still navigated rugged, dirt trails on foot or horseback to attend local markets, schools, health clinics, or state offices. The program has injected substantial government funds into upgrading roads, albeit these often still require a motorbike or four-wheel drive. It has also resulted in increased access to electricity for farmers in Bát Xát District, in part due to the construction of several small hydro-electric dams. 'Modern' housing styles (made with bricks and corrugated iron or asbestos tiles) have also been promoted (Nguyen, 2016, 2018; interviews, 2018). However, many of these changes have required cash inputs from farmers.

This cash has been harder to find for farmers as the state has also been restricting farmer access to forests, limiting forest-based or supplemented livelihoods. Beginning in the early 1990s, numerous programs have aimed to significantly increase forest cover, restrict swidden agriculture, and classify forests and their permitted uses (McElwee, 2004b; Castella *et al.*, 2006). These have included nation-wide programs such as the Regreening the Barren Hills and Five Million Hectare Reforestation Program focusing on reforestation and afforestation efforts. Both programs were officially promoted as rural development initiatives to improve environmental and economic contexts, increase resource production, and encourage biodiversity conservation (McElwee, 2009, 2016).

While forest cover has remained a concern for the state, Bát Xát District has substantially more closed-canopy forest cover than other nearby districts. In 2014, it was calculated that 63 percent of Bát Xát District was closed-canopy forest compared to 12 percent 15 years earlier, an increase of over 400 percent (Trincsi, 2014). While this increase in forest cover could be partially due to government silviculture programs, farmers repeatedly suggested to us that an increase in cardamom cultivation had improved forest cover, since farmers were explicitly protecting and regenerating forest cover for their cardamom plots (interviews, 2018).

Despite these farmer efforts, the government has had different opinions regarding Bát Xát's landscape management. In 2013, the Lào Cai Province People's Committee (LCPC) passed Decision 12 aiming to curb black cardamom cultivation (Lào Cai Department of Agriculture and Rural Development [LCDARD], 2013). Citing the need to improve sustainable forest management, officials from the Lào Cai Provincial People's Committee and Department of Rural Development argued that cardamom cultivation hindered forest regeneration. This was specifically due to the cutting of immature trees for enhanced cardamom productivity and the burning of dead wood to dry the spice (Lào Cai Province officials, 2018; LCDARD, 2013, 2016a, 2016b). Moreover, beginning in 2015, a new project called KfW8 or "Sustainable Forest Management and Biodiversity as a Measure to Decrease Carbon Dioxide Emissions" was implemented throughout the provinces of Lào Cai, Yên Bái, Lai Châu, Hà Giang, and Bắc Kạn (Management Board for Forestry Projects, 2015). With a budget of US\$32.31 million funded by Kreditanstalt für Wiederaufbau, a German development bank, KfW8 aims to increase carbon stores, improve economic development, enhance biodiversity conservation, and enhance forest ecosystem services (MBFP, 2015).

Focusing on high-elevation black cardamom forests, the KfW8 project established the Bát Xát Nature Reserve in 2017, spanning five communes, an area of 18,637 hectares or nearly 20 percent of the District (LCPC, 2017; Figure 1.). Within the core of the Nature Reserve, timber and NTFP collection are prohibited, except cardamom (for now). However, farmers are not allowed to expand cardamom plots, nor use dead wood for fires to dry cardamom.<sup>10</sup> Government officials added that while cardamom cultivation is only restricted currently, it will be banned in the future (interviews, Bát Xát District officials, 2018).

District- and commune-level KfW8 staff have been promoting and providing loans to farmers to encourage alternative, non-cardamom income sources. The Assistant Director of the Bát Xát Nature Reserve explained: "With the KfW8 project, we have been promoting the cultivation of specific medicinal crops around Y Tý Commune, in addition to fisheries and pear tree cultivation around the Nature Reserve so farmers have a substitution for black cardamom income" (interview, 2018). Moreover, an agricultural extension agent in Bát Xát District added: "In the future, we want farmers to specialize in medicinal plant and fruit tree production so that they have a guaranteed income source and the same buyers for their product" (interview, 2018). These

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<sup>10</sup> This makes cultivation significantly more difficult as fresh cardamom is far heavier to transport than dried cardamom. Typically, cardamom is carried out of the forest in 50-kilogram bags, initially on a farmer's back for a few kilometers, and then by motorbike.

quotes highlight how staff directly related to the KfW8 project, as well as other local state officials, have been progressively encouraging farmers to invest in the cultivation of specific, state-approved crops or livestock rearing touted as successful socio-economic development options. Specific to Bát Xát District, ethnic minority farmers have been increasingly persuaded to grow particular medicinal plants and trees (especially pear trees), and specific varieties of rice. Concurrently, water buffalo, local black pigs, and cold-water trout are the most promoted livestock (LCPC, 2015, 2016b). With government attempts to reconfigure ethnic minority livelihoods being prevalent and persistent, we wanted to determine how these 'ideal' livelihoods were being internalized by ethnic minority Yao, Hmong, and Hani farmers in the District.



Figure 1: Map of Bát Xát District, Lào Cai Province; Bát Xát Nature Reserve in green. Map created by Nguyen N. Binh.

## 5. Results: Bát Xát farmers diversified realities

While Yao, Hmong, and Hani farmers in the uplands have collected black cardamom for their own medicinal use for generations, it has only been since the early 1990s that this changed to the intensified cultivation of cardamom under the forest canopy (interviews; Figure 2 and 3). Notably, upland farmers have increased their cultivation of cardamom in upland forests due to their need for cash to purchase the agricultural inputs required to grow hybrid rice and maize, in addition to the rising costs of daily necessities. This means that farmers in Bát Xát District find themselves increasingly integrated into the market economy via their trade of cardamom as a cash crop, while concurrently facing state sanctions *against* increasing cardamom cultivation. Moreover, they are also contending with a rising number of extreme weather events devastating their cardamom harvests, while being increasingly encouraged to cultivate new cash crops or livestock options.





Figure 2: Red, ripe cardamom fruit. Photo by first author, 2022.



Figure 3: Cardamom shrubs under closed-canopy forest cover. Photo by first author, 2022.

In order to enhance our comprehension of how farmers are reshaping their livelihoods, we classify them into four distinct categories of livelihood diversification:

- 1) on-farm diversification;
- 2) on farm, non-farming activities;
- 3) local, off-farm activities; or
- 4) migration (as outlined by Ellis, 2000).

Additionally, the motivations driving diversification have been categorized into either distress or progressive factors. "Distress diversification" is a response to negative 'push' factors, for example, due to a decline in access to land or increasing debt (Bouahom *et al.*, 2004: 613; Ellis, 1998). "Progressive diversification" can occur due to a positive 'pull' factor and may encourage the multiplying of individual or household activities to improve livelihood outcomes (Bouahom *et al.*, 2004: 613; Scoones, 2009).<sup>11</sup>

We found that each of these diversification categories were present in Bát Xát District and, rather intriguingly, we often found multiple diversification activities among neighboring households, as well as within single, multi-generational households. We also found that ethnic minority farmers are being very careful to hand-pick the diversification options – state-supported or not – that align with their precise needs and the agricultural limits of their land. The most important of these diversified livelihood activities are analyzed in more detail below.

*Black cardamom: Farmers' first choice, yet not a state 'ideal.'*

Overwhelmingly, to meet the cash needs now required for cultivating hybrid rice and maize seeds, the most frequent diversification strategy that upland, Bát Xát farmers had initiated the cultivation and sale of black cardamom. As noted earlier, given that black cardamom had been harvested for medicinal use for generations, farmers could draw on their traditional ecological knowledge to expand cultivating plots fairly easily. Across ethnicities, farmers with more cardamom land were perceived as wealthier by neighbors and our observations. Increasing demand for cardamom from traders in Yunnan, China, also encouraged minority farmers to intensify their cultivation if they had access to appropriate land (interviews, 2018).

The topography and environment of Bát Xát District is ideal for cardamom as the crop requires the shade of a closed-cover forest canopy, elevations between 700 and 1,400 meters, consistent rainfall, and a highly humid environment (Aubertin, 2004). In 2012, prior to most cardamom-harming weather events, respondents typically reported receiving US\$5.40/kilogram for their harvests (interviews, 2018).<sup>12</sup> That year, household harvests in Bát Xát District generally ranged from 150-350 kilograms, providing incomes of roughly US\$840-2,840. These sales contributed substantial financial capital of households, allowing farmers to buy hybrid seeds and their associated inputs (especially chemical fertilizers and pesticides), while also upgrading houses, buying motorbikes, and paying school fees.

Yet, this 'diversification success story' became far more complicated in the late 2000s when Bát Xát District farmers became increasingly exposed to extreme and extended periods of rain, drought, and cold-weather precipitation (including snow, hail, and freezing rain), as well as devastating floods for some. Farmer interviewees recalled the winters of 2015 and 2016 as being exceptionally harsh, with 2016 perceived to be the 'toughest winter' in living memory, with intense and prolonged cold plus irregular, heavy snowfalls. This combination killed thousands of cardamom plants due to their sensitivity to cold temperatures and fruit

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<sup>11</sup> Diversification strategies may also be categorized as coping or adaptation strategies, although this remains somewhat convoluted in the literature (see Davies, 1993; Hussein & Nelson, 1998; Small, 2007; Agrawal, 2010).

<sup>12</sup> At the time of fieldwork in 2018, the highest price reported by respondents was US\$20/kilogram, secured in 2017 due to limited harvests. Between 2012 and 2015 the price fluctuated around US\$5.60, increasing to around US\$9.45 during years of more limited harvests (interviews, 2018).



development hindered for at least two to three years. As Vang, a 40-year-old Hmong farmer recalled, the 2016 winter caused the "most snow damage ever, with 80 centimeters in the cardamom forest!" (interview, 2018).<sup>13</sup>

In 2015 and 2016, cultivators noted that their cardamom harvests dropped to less than one-third of their regular harvest, although many experienced a complete crop failure. Complete, consecutive crop failures steadily increased from 2013, culminating in just under two-thirds (62%) of cultivating households recording no cardamom harvest in 2017. Muas, a 31-year-old Hmong farmer recalled, "before, when I was a child, there were no floods or landslides, but now they're worse than before...in my cardamom field I lost about 400 cardamom shrubs" (interview 2018).

Farmers remained extremely anxious about the increasing severity and frequency of extreme weather events impacting not only their cardamom, but also livestock and subsistence crops, particularly rice and maize. Moreover, they noted that they now had to contend with the uncertainties surrounding the establishment of the Bát Xát Nature Reserve. Cardamom cultivators we interviewed were extremely frustrated with the establishment of the Reserve, with over 70 percent arguing that cardamom cultivation had had a positive impact on both preserving and generating closed-canopy forests. A 28-year-old Hani male expressed his frustration: "My parents and their parents helped to regenerate these forests, especially because cardamom needs it [closed-canopy forest]. How can they now tell us that we cannot harvest any trees or grow more cardamom?" (interview, 2018). Due to this combination of rising extreme weather events and new, restrictive forest policies, many farmer interviewees had decided they must adapt again, diversifying their income sources further through intensifying existing livelihood strategies, planting cash crops, or undertaking waged labor, trading, or tourism, analyzed next.

*Farmer adaptation to extreme weather and state policies: The three top picks*

**Livestock Intensification:** Given that livestock rearing has been an existing component of livelihood portfolios for upland farmers in Bát Xát District for generations, it is not surprising that many farmers intensified livestock rearing as a distress diversification response to the harsh winters of 2015 and 2016 when their cardamom plots were badly impacted. Indeed, raising more livestock for trade was the most common adaptation approach that farmers reported, with 60 percent of interviewees deciding to start to raise and sell animals for cash. The Vietnamese government has also been promoting animal husbandry, especially of black-bellied pigs and water buffalo as an 'ideal' livelihood pathway for ethnic minority farmers since the mid-2010s (LCPC, 2015, 2016b).

While many farmers began to raise more than one type of animal for sale, the most popular were chickens and black pot-bellied pigs, with just under a two-fifths of farmers starting to raise chickens, pigs, or both. Farmers noted that chickens sold for roughly US\$9-11 per head, and they tended to sell 10-60 chickens per year, gaining US\$85-540. A similar proportion of farmers (29%) began raising local, black pot-bellied pigs for trade. They typically sold piglets for US\$4 each, or large black pigs for US\$4 per kilogram (ranging from 30-100 kilograms in weight). This meant that farmers could generate roughly US\$350-US\$2,175 in total, depending on the size and number of pigs sold. This was a strategy for all interviewed Hani farmers (16) and roughly one-fifth of Yao and Hmong participating farmers. Raising pigs and chickens was especially common for farmers with less land (natural capital) suitable for growing buffalo grass or grazing or less financial capital for purchasing young buffalo.

Eleven percent of interviewed farmers had started to breed buffalo for sale (rather than for their own use as on-farm labor, for ceremonial use, or to trade for emergency cash). They sold young buffalo from US\$475-990 depending on the age and health of the buffalo.<sup>14</sup> Buffalo rearing was predominantly a Hmong diversification strategy (22% of Hmong farmers and 3% Yao farmers participated in this diversification strategy).

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<sup>13</sup> All interviewee names are gender appropriate pseudonyms.

<sup>14</sup> This was particularly profitable when trade with China was far easier prior to the COVID-19 pandemic. Since then, the border closure and subsequent tight monitoring has also constrained the profitability of this livelihood strategy (interviews, 2022, 2023).

While these farmers had turned to livestock rearing to raise cash after important cardamom losses, many then suffered substantial livestock losses due to extreme weather events. A number of farmers had water buffalo die from exposure to extreme cold temperatures in 2015, 2016, or 2017, while others suffered pig and chicken deaths due to diseases caused by erratic changes in temperature.

After the extreme weather events of the mid and late 2010s the government started to allocate poultry (chickens, ducks, geese) to 'poorer' households in selected hamlets to compensate for climatic shocks, encouraging farmers to breed the animals for sale or sustenance. Arguably, farmers were harmed even more by this program. Nhay, a 55-year-old male Yao farmer, complained that government officials were "embezzling money... They supported us by giving us chickens, but the chickens were all dead or very ill... and transferred diseases to our other animals. The government bought sick poultry and kept the money!" (interview, 2018). Gu, a 26-year-old female Hani farmer similarly noted that "60-70 percent of poultry died in my village due to the diseased poultry from the government!" (interview, 2018).

Despite increased livestock vulnerability due to recent extreme weather events and problematic state interventions, raising livestock remained the most preferred distress diversification strategy. Farmers noted that livestock rearing allowed them three benefits: 1) they could remain on their farms (as opposed to migratory wage labor); 2) they could use existing traditional ecological knowledge for animal care (compared to 'learning curves' required for new crops and hence potential 'pitfalls'); and 3) livestock (e.g., buffalo, pigs, and chickens) embodied multiple capitals beyond financial value, being used for ceremonies and shaman rituals.

**Wage labor:** The second most common diversification strategy we recorded was wage labor, noted by over half (50%) of interviewed farmers. This was a surprising finding to us, given the lack of wage labor reported to date among ethnic minority farmer livelihoods elsewhere in the Province, except small numbers engaged in tourism (e.g., Turner *et al.*, 2015). Interviewees remembered the first wage laboring occurring in 2008, with an important rise in 2015 – a year of devastating extreme weather events for cardamom and livestock – and then a decline of farmers beginning since then. By ethnicity, wage labor was most common among Hani farmers, followed by Hmong and Yao. Xai, a 25-year-old Hani farmer who worked for money, explained that "Hani people are poorer than other ethnicities. Our elders only went out for wage labor and did not make fields, so we don't have much land and we must continue wage labor..." (interview, 2018).

Nine-tenths of farmers reported wage labor as an immediate distress diversification reaction to cardamom crop failures. While some considered it to be a long-term diversification strategy, 80 percent of farmers noted that they would stop wage laboring if they gained an average cardamom harvest again. Work was undertaken in either Vietnam or China, and included construction work, hydroelectric dam maintenance, portering at border markets, laboring in wood processing plants and fisheries, or tending to other farmers' crops such as rice, corn, cardamom, ginger and/or banana plantations. Wages in Vietnam ranged from US\$6-US\$11, while those in China ranged from US\$7-US\$10 per day.<sup>15</sup> Farmers tended to engage in infrequent, daily wage labor when cash was needed, but those working more consistently had yearly salaries between US\$172-US\$2,030 depending on days worked, labor skills required, and location.

Just over half (56%) of farmers working in China indicated that they did so illegally, while a third did not want to specify, and one-tenth said they had proper permits. Since January 2017, China required that foreign laborers work within a 10-kilometer zone from the border and have their permits stamped regularly at a Chinese-Vietnamese border crossing post.<sup>16</sup> These permits required precise documentation and fees, so many day laborers preferred to cross illegally. Participants noted that Vietnamese officials did not seem concerned with their activities in China, while Chinese officials were far stricter, with interviewees recounting stories of laborers being fined, beaten, and even imprisoned in China.

**Silviculture:** A third of farmers (35%) had decided to plant trees for cash income. Of these, half began with the support of government programs (progressive diversification), while the other half started to plant

<sup>15</sup> These amounts roughly equalled the average farm gate price of a kilogram of cardamom on either side of the Sino-Vietnamese border when interviews were undertaken in 2018.

<sup>16</sup> Vietnamese citizens were banned from wage labor in China and small-scale cross-border trade during the COVID-19 pandemic due to China's 'Zero-COVID' policy (interviews). The border has become increasingly securitized by the construction of a border fence, which is floodlit and electrified in some places.

saplings after 2015 when the first severe winter weather events took place (distress diversification), albeit using incentives provided by government programs. Most tree species were then sold to construct furniture and housing, with *cây mỡ* (*Magnolia conifera*), *cây xoan* (*Melia azedarach*), *cây sưa* (*Dalbergia tonkinensis*), and *cây sa mộc* (*Cunninghamia lanceolata*) being the most popular choices. Some interviewees also cultivated cinnamon (*cây quế* or *Cinnamomum cassia*) and "*cây lê tai nung*" or "French pear trees", both promoted by the state. Although some species were government funded, we found that farmer decision making was often based on observations of which species their neighbors had been growing (un)successfully.

Regarding 'French pear trees', these saplings were often promised to farmers near the Bát Xát Nature Reserve by local agriculture extension officials. We expected that the pear sapling distribution program through the Nature Reserve would have more successfully distributed healthy saplings because it was smaller scale and managed by the Nature Reserve, compared to national silvicultural programs coordinated through the District. However, pear trees were either never delivered or arrived in poor condition, perhaps due to the new staff and supply chains established through the relatively new Nature Reserve. Che, a 20-year-old male Hani farmer recalled: "The 30 pear trees I was promised were so late. The ones I did receive were nearly dead. I prepared the land for nothing!" (interview, 2018). Sapling health and reliable deliveries were also problematic for cinnamon trees when these were offered as part of government programs, leading to much frustration for farmers. Most silviculture had not provided income during our fieldwork period since many non-fruit species required 15-20 years to mature. However, farmers who successfully planted a number of pear trees they purchased themselves in early 2013, gained substantial incomes upwards of US\$2,580 in 2018.

We found that silviculture was only implemented by Yao and Hani farmers. Notably, Yao farmers, having greater access to land and financial capital, were more inclined towards this approach. In contrast, most Hani farmers ventured into tree cultivation due to government incentives. Additionally, we noted that Hmong farmers, characterized by limited financial literacy, exhibited a lower adoption rate of silviculture. This could also be attributed to the deferred return on investment, coupled with substantial initial financial capital requirements (interviews, 2018).

### *Three other on-farm and off-farm strategies*

Among other possible strategies, we found the three next most popular options among interviewees were experimenting with cultivating medicinal crops, small-scale trade of non-farm products, and tourism-linked activities.

**Medicinal plants:** Over one-third of farmers where we conducted interviews had turned to medicinal plant cultivation (other than black cardamom). They often grew more than one plant type to counter the possible susceptibility of specific crops to extreme weather, market price fluctuations, or pests. Farmers were quick to note the success that other farmers had found with different crops and explained that they often copied others' actions especially family members or neighboring farmers. While they would also sometimes accept to grow crops that the government was promoting, this was also often after someone else they knew had had success with a specific sponsored crop, requiring certain 'risk-taking farmers' to be present nearby or related. Others decided to rely on plants that they had previously grown for consumption only, and experiment with intensifying their cultivation for sale, much like they had done previously for cardamom. Similar to black cardamom as a livelihood strategy, the cultivation of medicinal plants emerged as a strategy that transcended ethnic and socio-economic distinctions among farmers. While contingent on agro-ecological constraints, the majority (over 75 percent) of farmers engaged in cultivating newly introduced crops were below the age of 35.

***Amomum longiligulare***, (green cardamom; VN: *cây sa nhân*) was cultivated by over one-sixth (15%) of interviewed farmers.<sup>17</sup> This was considered the most appealing medicinal crop, as it could be planted proximal to houses (compared to long and difficult treks to black cardamom fields), it required less labor than black cardamom (no drying involved), and it fetched comparable prices to black cardamom (US\$8/kilogram when wet). Of those cultivating green cardamom, two-fifths had adopted this crop as a progressive diversification

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<sup>17</sup> Green cardamom, like black cardamom, is a member of the ginger family, but is used less frequently for local household consumption and is more commonly sold directly to traditional medicine manufacturers.

approach in the early 2010s after seeing other farmers' success and having traders ask them to grow it, while the others began cultivating green cardamom after 2015 due to extreme weather events. May, a 46-year-old female Yao farmer who was cultivating sufficient rice for her household's consumption, had decided to convert all her maize plots to green cardamom because "maize is not profitable. If my maize crop is bad this year, I'll just plant green cardamom and buy maize" (interview, 2018). Highlighting the confusing agricultural advice farmers often received from local officials, officials in 2018 noted that green cardamom cultivation was a positive way for ethnic minority farmers to gain financial capital, arguing that this crop had neutral environmental impacts. In 2022 and 2023, interviews with other state officials revealed that the 'official line' had changed to green cardamom being the cause of soil erosion and deforestation.

Farmers also intensified the cultivation of *Xuyên khung* (*Ligusticum striatum*), either as a progressive diversification strategy to provide cash or as distress diversification for farmers who had cardamom crop failures in higher elevations. Like black cardamom, it was originally collected for household medicinal use, before farmers started to experiment with its cultivation for trade. Although the market price remained significantly lower than black cardamom, one-tenth of farmers we interviewed cultivated *xuyên khung*, with half beginning to intensify production for sale around the same time they began growing hybrid rice in 2010 and the other half beginning after the harsh 2015 winter. Farmers reported selling wet and dried roots for a total revenue of US\$130-1,550 per year.

As mentioned above, the KfW8 project aims to protect biodiversity in the Bát Xát Nature Reserve, encouraging farmers to grow alternative crops (outside the Reserve) instead of black cardamom (inside the Reserve) (interviews, Bát Xát officials, 2018, 2023; LCPC, 2017). In tandem with district-level agricultural extension officers, KfW8 staff promoted the cultivation of two additional medicinal crops to replace black cardamom incomes: *sâm đất* (*Talinum paniculatum*; fame flower) and *đương quy* (*Angelica sinensis*; female ginseng), both grown at higher elevations. These alternative crops were also supported by provincial cash-crop policies (LCPC, 2015, 2016a, 2016b).

Despite farmers receiving encouragement to grow these two crops from agricultural extension officers and KfW8 staff, few had taken them up, with just over one-tenth growing *sâm đất*. These farmers also noted that they had started to experiment with *sâm đất* due to cardamom crop failures rather than any government incentives. Incomes from *sâm đất* ranged from US\$20-430 per year depending on market demand, quantity, and parts of the plant sold. Meanwhile, roughly one-tenth of farmers had started to cultivate *đương quy*, gaining US\$325-US\$645 from selling the roots and leaves at local markets.

The state's involvement with *đương quy* had caused farmers considerable angst. In conjunction with local officials, a medicinal plant company from Lào Cai City had forcibly rented land from some farmers to grow the crop, with local agricultural extension agents using a portion of this land to grow a demonstration plot to encourage local farmers to follow suit. The company and government then promised to purchase farmer harvests at a set price. Yet, Ngan, a 43-year-old male Yao farmer, explained "they promised to rent our paddy land from us for them to grow *đương quy*. Instead, they couldn't even grow *đương quy*, while our fields produced nothing, and I still haven't been paid after six months!" (interview, 2018). Adding to frustrations, Cuong, a 28-year-old female Hani farmer, noted bitterly that: "The government purchased it [our crop] below the promised price. I don't want to sell to the government anymore. China always has a better price for *sâm đất* anyways" (interview, 2018). Overall, the low uptake of these medicinal plants as diversification options – despite encouragement from KfW8 staff within the District, and local extension officials implementing provincial policies – reflected farmers' caution when working with state programs being actioned at different scales. It also signaled farmers' acute awareness of local agro-ecological limits, and other farmers' successes or failures.

**Becoming a trader:** A small number of farmer interviewees (one-eighth) had decided to engage in the small-scale trade of non-farm goods as a diversification strategy. This trade included selling everyday goods (e.g., agricultural inputs and tools, clothing) at local markets, or acting as intermediary NTFP traders (e.g., for black cardamom, insects, plants, mushrooms) within Vietnam, or taking these across to Yunnan, China, to sell. Others engaged in regional rural-urban trade between Bát Xát District and Lào Cai City (e.g., clothes, electronics, fresh noodles). This strategy was predominantly embraced by Yao and Hmong men aged 40 and above, except for a 53-year-old Hani woman whom we interviewed. However, trading as a strategy encountered

several obstacles, demanding financial capital for upfront goods purchase, language proficiency for effective communication, physical assets like trucks for transportation, and social capital encompassing trading networks and shared financial and physical resources.

Only a small proportion of these farmers had been trading before extreme weather events began to take a serious toll on cardamom crops and livestock, with the majority beginning in 2015. Farmers who traded 'everyday' items made roughly US\$8 on slow days, reaping the lowest profits of the different trading options, while NTFP intermediary traders (despite reporting occasional losses) often made yearly gains of nearly US\$1,505, with one rural-urban trader announcing a yearly profit of US\$5,160 for trading *sâm đát*. Hmong farmers who traded 'everyday' items often pooled their cash together to purchase or rent a truck to buy goods in China to then sell in Vietnam, requiring a high degree of trust to share such a valuable physical capital asset. On the one hand, state officials noted that these small-scale trading strategies challenged specific government initiatives that were trying to encourage farmers to increase their on-farm cash cropping, but on the other hand these traders fell in line with government ideals of 'rural entrepreneurship' leading, in turn, to greater market integration and intensification (McElwee, 2004a).

Tourism activities: Due to rapidly increasing tourism in bordering Sa Pa District, local officials, including KfW8 staff, noted that they hoped to attract more tourists to locales near the Bát Xát Nature Reserve, and to encourage tourists to include the district in motorbike "border loop" routes. Prior to fieldwork, three homestays had existed in Y Tý, the closest town to the Nature Reserve, two owned by Kinh individuals with no agricultural livelihoods, and the third owned by a Hmong farmer, Muas. Muas, earned roughly US\$2-US\$4 per guest, per night, and \$860 for leading hikes up a nearby mountain, a venture he had initiated 2013. At the time of fieldwork in 2018, four more homestay operators were preparing to open small businesses, with three (one Hmong and two Hani) noting that their tourism endeavors were due to a combination of observing the success of Muas and being concerned regarding their own limited cardamom incomes. These soon-to-be homestay owners indicated that they had saved income from wage labor to invest in this capital-intensive strategy, with their initial turn to wage labor being due to weather-induced cardamom crop failures. Returning to Y Tý in 2022 and 2023, over 20 homestays were in operation (five-sixths owned by local ethnic minorities), plus one large hotel owned by a Kinh and Hmong individual. The obstacles hindering the adoption of tourism as a livelihood strategy are notably more challenging compared to trade. This is primarily due to the increased investment needed for establishing homestays (financial capital), the necessity for enhanced language proficiency and marketing skills (human capital), robust social networks and social skills to attract tourists (social capital), and the possession of land for homestays or access to trekking routes (natural capital).

However, tourism was complicated by the District's geographic proximity to the Chinese border, which is highly monitored for foreigners. The Nature Reserve, District, and Province have been heavily promoting tourism since 2017. Muas frustratingly expressed: "The government promotes tourism here, but the Border Defense Force makes it so difficult! They charge foreigners money and forbid some people to stay. The government doesn't know what it wants!" (interview, 2018). This highlighted conflicting policies across scale as the National level Border Defense Force restricted overseas tourism in the District – specifically near the nature reserve – while local farmers as well as district and provincial officials were very keen to expand tourism.

## 6. Discussion: Deliberation, diversification, and defiance

Three key elements stood out from our analysis that we wish to highlight here: first, the importance of focusing on interventions at different scales; second, how an actor-oriented approach to livelihood approaches allows us to better understand why farmers were increasingly frustrated with new, state-supported interventions to mold them into 'ideal farmers', while their own traditional ecological knowledge was being ignored; and third, the ways that a focus on farmer agency, supported by an actor-oriented approach, reveals the subtle ways that farmers were deciding which interventions to implement, experiment with, or ignore.

A number of national and provincial level interventions come with ambitious objectives to create 'ideal farmers' in Vietnam's northern uplands. Yet, in Bát Xát District at least, these were frequently impractical or implausible to implement at the household and hamlet levels. A multi-scalar policy analysis and interviews with state official and program staff at a range of administrative tiers thus highlighted just how incongruent a number

of policy approaches were, despite Vietnam's top-down administrative structure. For example, German funds to conserve carbon and biodiversity were strongly supported by national and provincial policies and officials. However, district- and hamlet- level officials were far less certain that they could implement and enforce such strict regulations 'on the ground' to restrict or completely ban cardamom cultivation. Provincial officials (who were overwhelmingly ethnic majority Kinh from the lowlands) were pushing particular crops on farmers, while officials at the commune level (sometimes local ethnic minority farmers themselves) were placed in the awkward position of already knowing that local environmental conditions were not appropriate for the respective species. Additionally, local officials were also aware of the limited trade networks that would be able to take new crops to relevant markets.

In comparison, provincial officials, based in larger provincial capital cities, were removed from such socio-economic logistics and realities, and often assumed appropriate trade networks were already in place. Moreover, in Vietnam's highly hierarchical state administrative system it was not deemed appropriate for lower-ranking officials – despite their relevant, localized expertise – to suggest to higher-ranking officials that certain policies were impractical for local contexts or inhabitants. The fact that many local officials were ethnic minorities and, through years of discrimination and state discourse, did not feel it culturally appropriate to suggest alternatives to Kinh, higher ranked officials, further inhibited possible multi-scalar, fruitful discussions that might have led to better supported local livelihoods.

Further, the untested and uncoordinated alternative income pathways that the KfW8 project, and district and provincial programs and officials were advocating for farmers with cardamom plots in the Nature Reserve, were forcing farmers to gamble with unproven livelihood strategies, on top of having to negotiate restrictions being placed on current livelihoods. With state officials failing to successfully cultivate trial crops of medicinal plants, delivering poor-quality plants (or failing to deliver any), and renegeing on promises to purchase harvests at a certain price, farmers remained distrustful and weary. Another layer of complexity was added due to the fact that these convoluted and seemingly haphazard directives could be reversed or altered at any time, such as the promotion and subsequent impending ban of black cardamom cultivation, confusion over green cardamom as a suitable alternative, and confusing regulations regarding tourist access to the District.

Undertaking an actor-oriented approach to livelihoods highlighted farmer frustrations with state interventions that overlooked localized traditional ecological knowledge and agro-ecological and economic constraints. Aside from the promotion of a number of inappropriate crops for local growing conditions, new forest resource restrictions frustrated local stewards, especially after generations of afforestation and conservation, partly attributed to black cardamom cultivation. Farmers indicated that they had intensified cardamom cultivation to purchase agricultural inputs linked to hybrid seeds, once government subsidies were reduced or completely removed. With new forest restrictions and increasing agricultural and living costs, farmers were increasingly frustrated and anxious.

Given that black cardamom had fueled forest conservation *and* helped farmers to undertake agricultural intensification via cash income from cardamom sales for agricultural inputs, one might realistically think that government officials at a range of scales – and German funders – would approve of this livelihood strategy. Although national and provincial officials had judged cardamom cultivation to be a positive income source for upland ethnic minorities in the past, provincial officials had changed their tune and were arguing – in line with staff from the KfW8 project – that black cardamom cultivation was detrimental to forest ecosystems. Official perspectives thus appeared to take an 'all or nothing' approach. Although there is some merit to concerns over forest quality and cover due to black cardamom cultivation, there is most certainly a possible middle path that could support responsible forest conservation *and* cardamom cultivation (as has been trialed successfully in neighboring Laos, see Ducourtieux *et al.*, 2006). Despite ethnic minority farmers working to conserve forest cover for their black cardamom cultivation and actively ensuring forest quality, officials kept drawing on dominant narratives to problematize and reconfigure these livelihoods.

Our interviews with ethnic minority farmers uncovered the finer details of farmer agency regarding why and how they were deliberating new livelihood strategies. An actor-oriented approach also helped reveal the subtle ways that farmers were determining which current strategies should be continued or intensified, in addition to which newly arrived state-endorsed or non-state-related strategies to implement, adapt, or ignore.



Natural capital was the most limiting barrier to accessing diversification strategies, as variations in elevation and agro-ecological conditions limited what plant species farmers could grow. Instead of uncritically following state recommendations, farmers were cautious not to 'put all their eggs in one basket' (*cho tất cả trứng vào một giỏ*), frequently deciding to employ other strategies *not* being promoted by the state (c.f. Minh Chau Lam, 2021).

Defying state attempts to create 'ideal' cash cropping agricultural subjects, farmers drew upon social capital ties to determine the degree to which specific crops, as well as wage labor, trade, or engagement with tourism were appropriate diversification strategies for their needs and access. Extended family networks, that often reached far across the District due to cultural marriage practices that relocate women when married, and intra-village discussions and observations played a key role in informing farmers of possible opportunities.<sup>18</sup> For example, when assessing off-farm wage labor options, these networks provided reassurance regarding safe working conditions, (il)legal border-crossing strategies, and connections to friendly employers. Wage laborers extolled the virtues of this livelihood option to others in their respective villages, with neighbors observing the potential benefits through new agricultural machinery, motorbikes, house renovations, and more lavish ceremonies that remittances or returnees had generated. These same networks played a key role in helping farmers pool financial capital together to purchase goods from China more easily and cheaply. Farmers also observed the successes that some farmers had had with medicinal crops, learned best practices for cultivation from each other, and established private trade networks with levels of trust the government had not been able to establish.

## 7. Concluding thoughts: 'Ideal' livelihoods and subjects for who?

In Vietnam's upland Bát Xát District, a barrage of state development policies and plans have resulted in the implementation of strict forest conservation policies with one aim being to integrate upland farmers into an agrarian transition at 'full-speed.' 'Environmental rule' is pervasive and powerful here, with the state replacing so-called 'destructive' black cardamom cultivation with agricultural intensification and new forms of cash cropping. Yet, ethnic minority farmers are continuing to harness their agency to make prudent livelihood decisions, drawing upon their oft-culturally rooted social capital ties, traditional ecological knowledge, and market acumen (Bebbington, 1999; Turner, 2007). Ethnic minority farmers are still choosing to prioritize the cultivation of staple crops instead of purchasing them using income gained from other livelihood strategies. Defying 'ideal agricultural subject' or 'ideal farmer' pressures, while also navigating climatic shocks, farmers instead rely on customary livelihood strategies and continue to cultivate black cardamom where possible. When faced with new opportunities or necessary livelihood diversification, farmers rely on long-held trust relationships to deem which approaches to trial and follow. We thus argue that these farmers *are* working to be as 'ideal' as possible, but, as we hope to have shown, to be ideal in these uplands means to forge a diversified sustainable livelihood rooted in culturally grounded understandings and appreciations of local climate variables, crop and soil conditions, successful diversification and trade strategies, and social networks, while being highly cautious of state-endorsed interventions.

In theory, state-driven development interventions in these uplands *could* provide positive outcomes for local livelihoods while also protecting the natural resource base *if* government officials were willing to consider local contexts, socio-cultural considerations, and economic vulnerabilities. Such interventions *could* involve the promotion of sustainable black cardamom cultivation, looking at black cardamom cultivators as forest stewards rather than forest destroyers (see Law, 2022 for ginseng cultivators in the Appalachians). Endorsing black cardamom as a favorable livelihood strategy could support farmers to cultivate a crop that farmers already know well, for which they already have access to appropriate natural capital, and for which they have established trust relations with local traders. The endorsement and encouragement of cardamom cultivation with more adaptive forest management policies could potentially provide greater livelihood security for upland

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<sup>18</sup> Yao and Hmong individuals practice clanic exogamy, marrying outside of their patronym, while Hani individuals marry outside their paternal sublineages, but not necessarily outside of their patronym (Tooker, 2012; Michaud *et al.*, 2016). Further, Yao, Hmong, and Hani individuals practice virilocal residence, meaning that after marriage, the wife moves to a husband's residence, which is usually located in the same hamlet as his parents.

households currently navigating an immense amount of uncertainty and hardship, while also meeting state and foreign investment objectives for environmental conservation and food security.

Enhanced understandings of local contexts, plus the application of such considerations in policy approaches by state officials and non-state actors are essential to the implementation of more appropriate and beneficial development interventions. Whether or not such understandings and considerations (e.g., the importance of culturally embedded social capital ties and traditional ecological knowledge) will be acknowledged by government officials at all scales in the case of Lào Cai Province is yet to be seen. To date, however, interventions directed from the national level, rooted in the lowlands, have rarely (if ever?) integrated culturally nuanced, upland livelihood approaches (Baulch *et al.*, 2007; Fforde, 2011; Turner *et al.*, 2016; Minh Chau Lam, 2020).

An opportunity exists here for large international development organizations, either state funded or non-government organizations, to play a critical role in advocating for the local contextual considerations that we have argued as being key to positive interventions in these uplands. However, these foreign agencies remain under the close scrutiny of the Vietnamese state, a one-party socialist regime with little room (if any) for alternative approaches to pre-approved state directives. Nonetheless, we remain hopeful that work from academics concerned with better understanding and supporting sustainable upland livelihoods, while placing ethnic minority farmer knowledge at the center of our discussions, can slowly convince foreign donors and perhaps even young Vietnamese state officials to see the possibilities of different ways of doing upland development.

In sum, the convergence of particular state rhetoric, the intensification of extreme weather events, and the implementation of specific policies on the ground is undeniably contributing to these intricate challenges faced by farmers across northern Vietnam. As noted in our introduction, this situation likely extends beyond national boundaries as neighboring socialist Laos and China also implement such approaches, underscoring the urgency for meticulous fieldwork and comprehensive analysis. By delving into the nuances of these interactions, we are better equipped to decipher the complex interplay of forces shaping the livelihoods of ethnic minority farming communities and to identify pathways towards more resilient and sustainable futures.

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